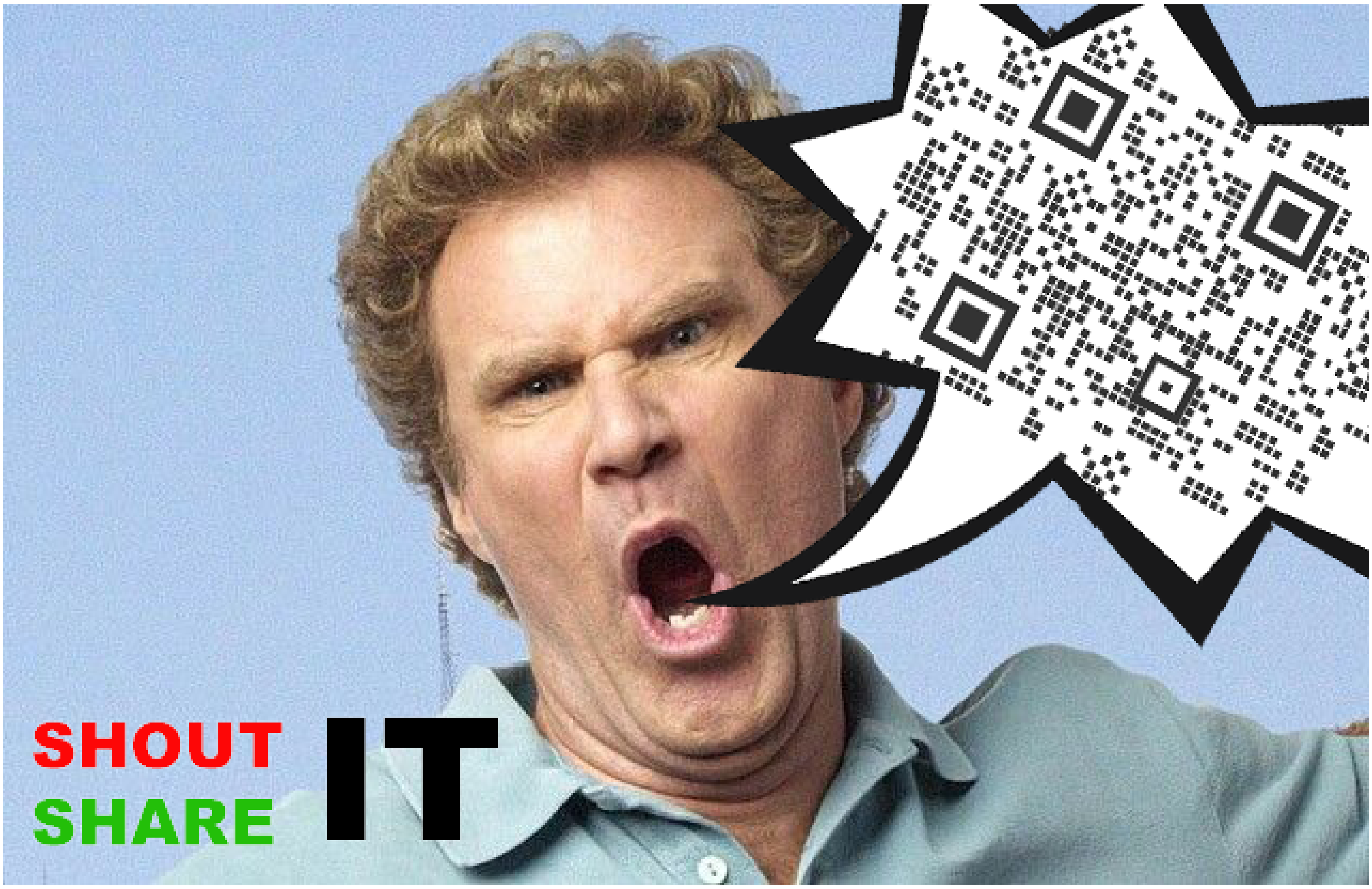
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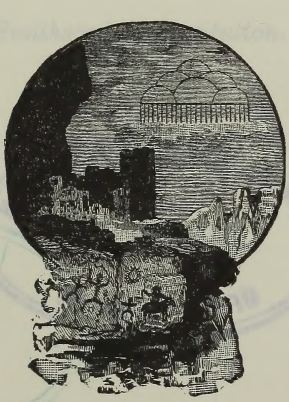
SMITHSONIAN INSTITUTION
BUREAU OF AMERICAN ETHNOLOGY
BULLETIN 143

HANDBOOK
OF
SOUTH AMERICAN INDIANS

JULIAN H. STEWARD, *Editor*

Volume 2
THE ANDEAN CIVILIZATIONS

Prepared in Cooperation With the United States Department of State as a Project of the Interdepartmental Committee on Cultural and Scientific Cooperation.



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LETTER OF TRANSMITTAL

Smithsonian Institution,
Bureau of American Ethnology,
Washington, D. C., June 1, 1944.

Sir: I have the honor to transmit herewith a manuscript entitled "Handbook of South American Indians. Volume 2. The Andean Civilizations," edited by Julian H. Steward, and to recommend that it be published as a bulletin of the Bureau of American Ethnology.

Very respectfully yours,

M. W. Stirling, *Chief.*

Dr. C. G. Abbot,
Secretary of the Smithsonian Institution.

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PREFACE

The Handbook of South American Indians, of which the present volume is the second, has been prepared by the Bureau of American Ethnology as part of the Department of State's general program of Cooperation with the American Republics. It is an inter-American undertaking, written by scientists from throughout the Hemisphere.

The purpose and plan of the Handbook has been explained fully in the Introduction, which appeared in the first volume, so that little need be added here. In order, however, to clarify the place of the second volume among the five which will make up the Handbook, their contents may be briefly indicated.

Volume 1.—The Marginal Tribes: the archeology and ethnology of the primitive hunting and gathering tribes of eastern Brazil, the Gran Chaco, the Pampas, Patagonia, Southern Chile, and Tierra del Fuego.

Volume 2.—The Andean Civilizations: the high-culture, farming peoples of the Andean Highlands and the Pacific Coast from Colombia to Central Chile.

Volume 3.—The Tropical Forest Tribes: the peoples, both horticulturalists and hunters and gatherers, of the tropical jungles and savannas and the subtropical areas of the Amazon Basin, Matto Grosso, Paraguay, and the Brazilian Coast.

Volume 4.—The Circum-Caribbean Tribes: the tribes of Central America, lowland Colombia and Venezuela, and the Antilles.

Volume 5.—The Comparative Anthropology of South American Indians: geography, languages, physical anthropology, population, and various aspects of culture treated distributionally and comparatively.

The Andean peoples are distinctive for their high native cultural development, for their rich archeological remains, and for their strong survival, both numerically and culturally, at the present day. In this volume, therefore, it is possible to trace the long-time trends in what was one of America's most developed civilizations. These trends are first identifiable archeologically in the early centuries of the Christian Era, they culminate in the great *Inca* Empire of the Conquest Period, and they have left a deep impression on the modern Andean nations. This long sweep of history is covered by three types of articles, corresponding more or less to the major periods: archeological, historical, and ethnographic.

The extraordinary archeological riches of the Andes hold promise of eventually revealing the detailed development of native agriculture with its vast system of terraces and irrigation works, of planned cities and their relationship to the local agricultural communities, of architecture, bridges, and roads, of metallurgy, weaving, and the other arts of manufacture, and even of the growth and decline of empires. The full story cannot yet be told, however, because archeology in the Andean area is still endeavoring to construct a solid chronological scheme, according to which its cultural data can be arranged sequentially and thus developmentally. The major framework of such a scheme has been established in Perú, but many details await to be filled in. Elsewhere, especially in Colombia, chronology has scarcely been roughed out.

To construct a chronological scheme, pottery types are used as time-markers, comparable to index fossils in historical geology. When the age and distribution of these types are known, they serve to date other cultural materials associated with them. The necessity for first establishing a ceramic chronology, which is all too little understood outside the archeological profession, accounts for the great amount of field work devoted in recent years to ceramic stratigraphy and for the attention given in this volume to pottery types and their relative ages. Eventually, however, when the basic chronology is better established, it will be possible to describe the total cultural development with greater completeness and to link prehistoric and historic trends more closely together.

The historical articles pick up the cultural trends revealed by archeology and add those recorded in written history. These differ from the first type not only in their sources of information but in having to deal with the interaction of the aboriginal and the European cultures. The post-Conquest Period of Indian acculturation, especially in South America, has been almost completely ignored in the past. We believe that this volume of the Handbook has made some pioneering contributions to this subject.

The third type of article is ethnographic, based on modern field studies of contemporary tribes who represent the result of the long historical trends and the interaction of the Indian and Spanish cultures. Not over half a dozen such studies have been made heretofore, however, despite the practical as well as scientific importance of understanding the modern Indians.

By combining these three kinds of articles, it is possible to describe with considerable continuity an extraordinarily long period of culture development and change, especially in the Central Andes. Bennett's article on Central Andean archeology gives a general summary of all the prehistoric periods and cultures, with Larco Hoyle's supplying a remarkable sketch of what might be called the prehistoric ethnology of the North Coast, based on thousands of life-form pots, and Valcárcel's presenting special material on the archeology of Cuzco, the home of the *Inca* or *Quechua*, by way of background to the next article. Rowe brings together the threads of history in a complete ethnographic account of the *Inca* at the time of the Conquest, his article linking prehistory and history. Valcárcel adds detailed descriptions of two basic *Inca* patterns, the calendrical system and the markets, both subjects on which he is a leading authority. The post-Conquest development of *Inca* or *Quechua* culture under Spanish influence, a subject that has been awaiting the combined talents of an historian and ethnologist, is analyzed by Kubler. A special and somewhat controversial aspect of the post-Conquest period has been the exact nature and development of the ayllu—the agricultural community which seemingly has formed the stable nucleus of most Andean societies and which is so vital an element in contemporary national life. Perú's leading authority, Castro Pozo, has contributed an article on this subject. Central Andean trends are brought up to date by Mishkin's study of the modern *Quechua*, which, for want of published material, is based largely on his own field work in a village near Cuzco.

In the *Aymara* area, the historic and contemporary peoples are covered by Tschopik, whose description of modern *Aymara* ethnology comes from his own field study in Perú and from an unpublished manuscript by LaBarre, who worked in Bolivia. The area is completed with a brief account by LaBarre of the few surviving *Uru-Chipaya* of the Lake Titicaca region.

In the Southern Andes, the cultures were less developed than in the Central Andes, major archeological periods are less evident, and the natives are now largely assimilated to European culture. The subject matter consequently tends to be divided among articles according to areas, each with its tribe or local culture, rather than according to major time periods as in the Central Andes. These articles combine the data of archeology and history, but there are no ethnographic studies, except for the *Araucanians*.

The most interesting prehistoric peoples of the Southern Andes lived in Northwest Argentina, and their culture has long been the object of study by a distinguished group of Argentine anthropologists, each of whom has devoted himself to a special area. Of this group, Aparicio has given the Handbook an article on the *Comechingón* and their neighbors in the region of Córdoba; Casanova, one on the Puna and the Quebrada de Humahuaca; and Márquez Miranda, articles on the cultures of Santiago del Estero and on the Argentine *Diaguita*. The Southern Andean area is filled out by Bennett's article on the *Atacameño*, Willey's on the culture of La Candelaria, Bird's on the prehistoric and historic peoples on the Chilean North Coast, Lothrop's on the Chilean *Diaguita*, Cooper's on the *Araucanians* of Chile, and Canals Frau's on the *Araucanian* expansion into Argentina. Of all these articles, only Cooper's has been able to incorporate modern ethnological data in describing the *Araucanians.* This tribe, however, though numbering two or three hundred thousand persons, is probably the most scientifically neglected in the Hemisphere.

The Northern Andes region is considerably less known than the Central and Southern Andes. Its archeology has not yet established basic periods for prehistory, and little attention has been paid the modern peoples. Existing information is here summarized, however, in several articles. Collier presents Ecuador archeology, and Murra the historic peoples from the Conquest to the present day, relying heavily on the late Dr. Parson's unique field study of Otovalo for the description of the contemporary Indians.

For Colombia, Bennett summarizes the archeological areas of *Tairona*, Quimbaya, Upper Cauca, Nariño, *Chibcha*, and Sinú; and Hernández de Alba, the areas of San Agustín and Tierradentro, with supplementary archeological data on the Popayán region by Lehmann.

These archeological areas not only lack an established chronological scheme, but none, except *Tairona* and *Chibcha*, have been linked with the historic periods, causing a hiatus between the archeological and historical articles. The historic peoples, therefore, are covered in a series of separate articles: Park's on the *Cagabá* and their neighbors, an account based largely on his own field work; Kroeber's on the *Chibcha,* who, being now assimilated to the European population, are described on the basis of historic documents; and articles by three leading Colombian anthropologists on the difficult and involved region of the Southern Colombian Highlands. Hernández de Alba gives a résumé of the post-Conquest culture history and the modern ethnology, so far as it is known, of a large group of tribes including the *Páez,* among whom he has worked. In one article, Ortíz presents the native tribes and languages of this section and in another he describes the modern *Quillacinga*, *Pasto*, and *Coaiquer* from his own first-hand knowledge. Lehmann contributes an article on the native *Moguex* and *Coconuco.*

Adjoining the Colombian tribes described in this volume of the Handbook are others, especially those of the Cauca and Magdalena Rivers, of the Cordillera Oriental, and of the Pacific Coastal lowlands of Colombia and part of Ecuador, whose culture, though influenced by that of the Highlands, is basically of the Tropical Forest type. These will be included in the third and fourth volumes of the Handbook.

For the benefit of the general reader who wishes a résumé of the culture patterns and trends of the entire Andean area, Bennett has prepared an Introduction which summarizes the whole volume.

It is necessary to explain the terms Indian and Mestizo. North American readers, who are accustomed to thinking of the former as the designation of the Indian race and the latter as signifying mixedbloods, may have some difficulty in understanding that in the other American republics these have cultural rather than biological significance. In Ibero-America, Indians and Mestizos are indistinguishable racially, both being predominantly Indian, but the former are characterized by having a preponderance of native culture whereas the latter have assimilated a substantial amount of European culture. The precise differences are a perennial difficulty for the census taker, but in a practical sense it may be said that the Mestizo has been integrated into national life whereas the Indian has not. The latter cannot read or write, does not speak Spanish, and fails to understand European legal, economic, and social systems sufficiently well to cope with them. He is, therefore, characteristically somewhat maladjusted economically and socially. When he makes the adjustments he becomes a Mestizo.

As the Handbook articles deal only with the modern peoples who are Indians in a cultural sense, it is inevitable that they reveal the Indians' struggle to adapt themselves to changing conditions. The articles are, however, solely concerned with presenting in scientific terms the cultural processes involved. The practical aspects of the Indian problem have motivated the various governments to create Offices of Indian Affairs, which are charged with the task of protecting the Indians from the more disastrous consequences of the reaction of European customs upon the native patterns. As the Indians' slight understanding of European systems leaves them poorly equipped to solve their own problems, great efforts are being made to rehabilitate them economically, through restoration of lands and improved farm methods, and to reintegrate them culturally, through education and other means designed to facilitate their fuller participation in national life.

EXPLANATIONS

Tribal and archeological names.—Names of linguistic, tribal, and other ethnic groups are italicized, but names of archeological sites, areas, and periods are not unless the archeology can be identified with an ethnic group, in which case it is also italicized. The archeological cultures which have been identified with historic peoples are the *Inca*, *Chibcha*, *Tairona*, *Diaguita*, *Atacameño*, and *Humahuaca*, which therefore are italicized when used in an archeological as well as a tribal sense. Unfortunately, several tribal names have come to designate archeological cultures although there is no reason to attribute the archeological materials to the tribes. These names are not italicized: Quimbaya, Mochica, and Chimu.

Well-established archeological periods are capitalized, e. g., Chavín Periods, Early Periods, *Inca* Periods.

Definite pottery styles are also capitalized, e. g., Tiahuanaco style, Nazca style, Chavín style.

Terminology.—A large number of words appear in this volume which will not be found in an English dictionary, many of them archeological terms referring to periods, ceramic styles, and the like, and others cultural, taken from Spanish or *Quechua*. A list of the more important archeological terms will be found on page 74. The other terms are given in the Glossary, page 975.

Bibliography and citations.—References to the literature cited in the text are given by the name of the author, the date of his publication, and, in some cases, the page numbers. The full reference will be found in the general bibliography, where the authors are listed alphabetically and their works listed according to the year of publication. If reference is made to a volume in the text, it is followed by a colon in place of "p." or "pp." to set it off from the page numbers. Thus, 3: 49–65 means volume 3, pp. 49–65. Certain old chroniclers whose writings have been published in several editions are cited by part (pt.), book (bk.), and chapter (ch.), so that the material to which reference is made may be found in any edition.

ACKNOWLEDGMENTS

The editor acknowledges with deep gratitude the splendid cooperation of the many contributors whose names are listed subsequently. Their willingness to complete their tasks in the face of the many difficulties caused by the present world situation is evidence of their devotion both to inter-American cooperation and to the advancement of scientific cultural studies.

Particular gratitude must be expressed to Dr. Wendell C. Bennett, of Yale University, and to Dr. Gordon R. Willey, Assistant Editor of the Handbook. Dr. Bennett has not only written the general introduction and several of the basic articles on archeology, but he advised with the editor throughout the preparation of the volume, making many suggestions that contributed to the completeness, balance, and integration of the contents. As Assistant Editor, Dr. Willey has devoted full time to preparing this volume for the printer. His comprehensive knowledge of Andean cultures, as well as his willingness to assume many of the less glamorous tasks of an editorial nature, especially the preparation of the illustrations, has been a major factor in completing the manuscript early in 1944.

As the manuscripts submitted by the South American anthropologists were written in Spanish, a considerable amount of translation has been done. The editors did some of this. For translating the remainder, we are indebted to the Central Translating Division of the Department of State and to the Strategic Index of the Americas, Yale University. The editors, however, assumed the responsibility of putting the English versions of these articles into anthropological terminology consistent with that used throughout the volume.

The editors of the Handbook are deeply appreciative of the cooperation offered by institutions and individuals in selecting and lending illustrative material for the present volume. We are indebted to the University Museum, Philadelphia; the American Museum of Natural History, New York; the Chicago Natural History Museum; the Museum of the American Indian, Heye Foundation, New York; the Department of Anthropology, Columbia University, New York; and the Peabody Museum of American Archaeology and Ethnology, Harvard University, for making available many excellent photographs of specimens and field pictures, many of which have not been previously published. In South America, the Museo Nacional of Lima, Perú; the Museo de Historia Nacional of Santiago, Chile; the Museo Etnográfico de la Facultad de Filosofía y Letras of Buenos Aires, Argentina; the Museo Argentino de Ciencias Naturales of Buenos Aires; and the Museo de La Plata of Argentina have all contributed generously of both drawings and photographs.

A number of individuals, both in the United States and in the Republics of South America, have played an important part in supplying photographs of scientific importance and technical excellence. To Mr. James Sawders, of Nutley, New Jersey, and to Mr. Truman Bailey we are extremely grateful. Both of these gentlemen contributed willingly and freely fron the large number of photographs in their personal collections. We wish also to express our thanks to many other contributors: The Publicity Department of the Grace Line Steamship Co., of New York; Mr. W. E. Rudolph, of Larchmont, New York; the National Geographic Magazine, of Washington, D. C.; Dr. Alfred Métraux, of the Smithsonian Institution, Washington, D. C.; Dr. Donald Collier, of the Chicago Natural History Museum; Mr. John Wise, of New York City; Señor Rafael Larco Hoyle, of Trujillo, Perú; Dr. Luis E. Valcárcel, of the Museo Nacional, Lima, Perú; Dr. Paul Fejos of the Viking Fund, New York City; Dr. Bernard Mishkin, of Columbia University, New York City; Dr. Harry Tschopik, Jr., of Peabody Museum of American Archaeology and Ethnology, Harvard University; Dr. Fernando Márquez Miranda, of the Museo de La Plata, Argentina; Dr. Francisco de Aparicio, of the Museo Etnográfico, Universidad de Buenos Aires, Argentina; Dr. Gladys Reichard, of Barnard College, New York, who is acting as scientific executrix of the Elsie Clews Parsons estate; Dr. Gregorio Hernández de Alba, of the Servicio Arqueológico Nacional, Bogotá, Colombia; Dr. Willard Z. Park, of the University of Oklahoma; Mr. Thomas D. Cabot, of Boston; and Mr. George Hewitt Meyers, of Washington, D. C.

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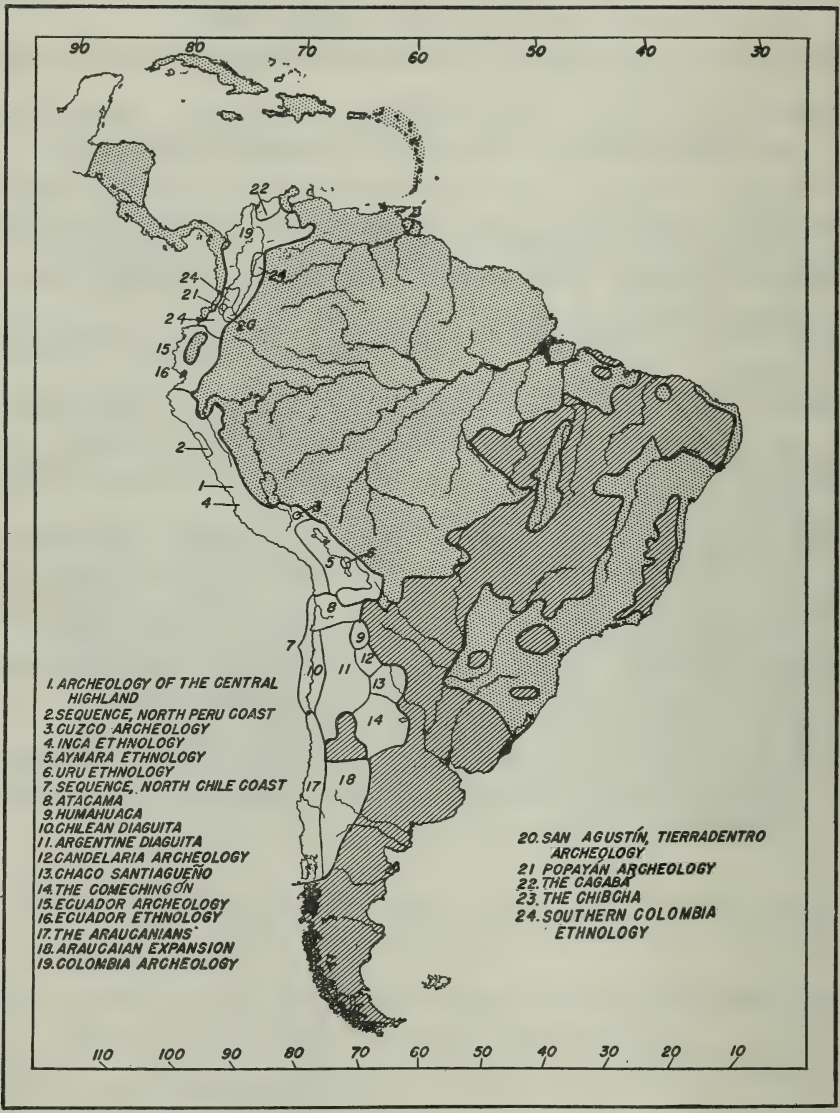
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5. AYMARA ETHNOLOGY
6. URU ETHNOLOGY
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20. SAN AGUSTÍN, TIERRADENTRO ARCHEOLOGY
21 POPAYÁN ARCHEOLOGY
22. THE CAGABA
23. THE CHIBCHA
24. SOUTHERN COLOMBIA ETHNOLOGY

Map 1.—Guide to the tribes and subjects of Volume 2 of the Handbook. (Parallel-hatched, area covered by Volume 1; stippled, Volumes 3 and 4.)

VOLUME 2. THE ANDEAN CIVILIZATIONS

PART 1. THE ANDEAN HIGHLANDS: AN INTRODUCTION

By WENDELL C. BENNETT

THE SETTING

The Highland region of the Andes of western South America was the center of the highest civilization in terms of Indian culture in South America (map 1). In the high mountains and along the desert western Coast of Perú, civilizations developed which are comparable in achievement and intensity to the *Maya* of Central America and the *Aztec* of México. From the point of view of complexity of culture and density of population, the Highland area of South America stands in marked contrast to the Amazon and Orinoco plains and to the grasslands of the Pampas and Patagonia. At the time of the Spanish Conquest, the three outstanding Highland cultures were those of the *Chibcha*, the *Inca*, and the *Araucanians*. Of these three, that of the *Inca* is the best known and was the most advanced in cultural achievement. Today the Andes region still has the largest Indian population in South America. In countries like Ecuador, Perú, and Bolivia, Indians form high percentages of the Highland population. From archeological work it is also demonstrable that complex civilization existed there for many centuries before the arrival of the Spaniards. In brief, the Andean region had been the center of high Indian civilizations in South America from about the beginning of the Christian Era up to the Spanish Conquest and is today a region in which the Indians are of the greatest economic and social importance.

The archeological past has been most intensively studied in the Perú-Bolivia section, and, as a consequence, five major time periods of pre-Columbian history can be distinguished. At the time of the Spanish Conquest much was written about the cultural achievement and political organization of the *Inca* civilization. Historical sources likewise furnish considerable information about the Indians during the Colonial and Republican Periods. Contemporary studies, although few in number, supply materials on the culture and life of the present-day Indians. In this region, therefore, the possibilities exist for a study of long-term cultural trends: through the five periods of the archeological past, during the era of Colonial and Republican history, and up to the present day. Furthermore, interpretation of many of the archeological finds is aided by the historical references and the contemporary Indian studies.

It is difficult to select a consistent time period for describing the Indian cultures of the Andean region as a whole. Many of the tribes have long since disappeared. Some of the Indian peoples have merged with the Spanish conquerors and survive today as Mestizos, mixed both culturally and physically. Even the Indians who have survived in great numbers have had their culture decidedly modified by the 400 years of European association. Consequently, various time periods are recognized in this description of the Highlands, including the archeological past, the time of the Conquest, the Colonial history, and the present day.

This introductory statement is concerned with the Highland region as a whole rather than with detailed description of any particular culture. In terms of modern political divisions, the Highlands include the aboriginal cultures in the mountainous areas of Colombia, Ecuador, Perú, Bolivia, Northwest Argentina, and Chile. The western Coastal plains of Ecuador, Perú, and Chile are also covered here. The whole area is dominated by the Andes Mountains from Colombia to Chile, a strip over 3,600 miles (5,760 km.) in length down the western Coast of South America and varying in width from 100 to 400 miles (160 to 640 km.).

A detailed geographic description of the Andes will be found elsewhere in the Handbook. (See Sauer, vol. 5.) In a simplified general view, the Andes Mountains consist of three principal ranges running parallel, north to south in Colombia, which merge into two parallel ranges in Ecuador. In Perú this parallel arrangement is no longer found but rather shorter ranges which run diagonally. In Bolivia there are again two north-to-south ranges plus a third which cuts eastward to form the maximum width of the Andes. To the south, the Andes are represented by a single major range which separates Chile and Argentina.

From one point of view the Highlands are united geographically by the dominant Andes. Some 57 peaks extend above 17,500 feet (5,300 m.) in altitude. Everywhere the Andes present formidable barriers, directing migration, limiting areas of expansion. Most passes in the mountains are over 12,000 feet (3,600 m.) in altitude (pl. 1). Altitude zones are important in terms of human habitation. However, from another view the so-called Highlands include several contrasting environments. The mountain region itself can be roughly divided into the Northern Andes, characterized by páramos, and the Central Andes, characterized by punas. The Northern Andes include, roughly, Colombia, Ecuador, and Perú north of Cajamarca. Here the rainy periods continue throughout most of the year, so that the higher regions of the mountains, between about 10,800 feet (3,300 m.) and the snow line, are typical páramos (pl. 16, *bottom, left*) consisting of a wet rain forest or wet brush and grassland. The Central Andes include most of Perú, Bolivia, Northwest Argentina, and North Chile. Here there are contrasting rainy and dry seasons, varying from 3 to 7 months in duration, so that the puna above 13,000 feet (about 4,000 m.) is covered by such plant life as the tola bush, the ichu grass, and the llareta plant (pl. 5). In southern Bolivia and in parts of North Chile, desert conditions exist, making still a third division (pl. 2, *bottom*).

The Pacific Coastal plain likewise presents contrasting environments, not only topographically but also climatically. Starting in southwestern Ecuador, desert conditions prevail (pl. 8) which increase in intensity down the Coast of Perú to a maximum in North Chile. Farther south, in the Central Valley of Chile a temperate climate is found, and in southern Central Chile, down to the Island of Chiloé, the Coast is covered by rain forests (pls. 10, 11). In spite of the contrast of the west Coast desert and the mountain environments, the two regions have been closely united culturally. A sharper cultural contrast existed in the Chilean Coastal region, particularly in the area of the heavy rain forest.

The Amazon tropics, which flank the eastern slope of the Andes, and the tropical areas of the Caribbean Coast of Colombia, and the Pacific Coasts of Colombia and northern Ecuador have long been true cultural barriers. In fact, the eastern expansion of the Andean cultures was blocked by the grass plains of Patagonia and the Pampas and the tropical forests of Bolivia, Brazil, Colombia, Perú, and Venezuela.

Within the Highland area there are few barriers of importance. By modern transportation standards, based on railroads and automobile highways, the high mountain ranges present many problems, but in terms of the indigenous cultures, based essentially on travel by foot or with llamas and alpacas, the mountain barriers were not insurmountable. In fact, within itself the Highland region was one of comparative mobility, the chief limiting factor being distance.

CULTURAL ORIGINS

EARLY MIGRANTS

At a time before the establishment of an agricultural pattern, early hunting and gathering peoples probably occupied, or at least migrated through, this Andean region. Evidence from southern Patagonia shows the presence of early nomadic hunters at a time estimated at about 5,000 years ago. Furthermore, the Patagonian evidence suggests that these were land Indians and not canoe users.

Land hunters who entered South America via the Isthmus of Panamá would probably proceed up the Atrato, Magdalena, and Cauca Rivers of Colombia, which lead from north to south back into the Andes. The dense jungles of the Pacific Coast of Colombia and Ecuador would probably not be attractive to land hunters without good knowledge of canoe transportation. In any case, a hunting pattern adapted to Andean conditions would undoubtedly progress with considerable rapidity south from Colombia through the mountains and then spread to the more favorable hunting region of the Chaco, the Pampa, and Patagonia. Moreover, the varied environmental zones in the Andes and the corresponding variations in flora and fauna might well have supported land hunters for a considerable time.

Direct evidence for such early migrations is meager in the Andean region. About 1921, at Punín, Ecuador, a human skull was found embedded in a volcanic-ash layer which also contained such Pleistocene fauna as ground sloth, mastodon, horse, deer, and camel. (See Collier, this volume, 767–784, and McCown, Handbook, vol. 5.) No artifacts were associated, but the long-headed low skull is somewhat like other early fossil finds from Lagoa Santa, Brazil. At another site in Ecuador remains of a mastodon were found in association with human artifacts, although the significance of this association has not yet been satisfactorily explained. Along the Coast of Perú are enormous shell heaps, presumably built up by an early fishing population, although so far little archeological work has been done in these sites. In North Chile, however, somewhat similar shell heaps have produced evidence of two periods of preagriculture occupation. (See Bird, this volume, pp. 587–594.) Future discoveries will undoubtedly increase the knowledge of these early migrants. However, the typical Andean culture pattern is based on the domestication of plants, whether by the early migrants or by peoples who entered the region later.

PLANT DOMESTICATION

Sauer (1936) pointed out some of the requirements for the domestication of plants: a "forcing bed" or a rich area which rewards the intensive use and care of plants; diversified raw materials for a well-balanced economy; soils which are workable with simple tools; native vegetation which is easily disposed of by primitive methods; and a genial climate with seasonal contrasts. Many areas in the Highlands meet most of these requirements. Furthermore, isolated mountain farms allow for the diversification and selection of plants. It is probable that some important species were first domesticated in the Andean Highlands. As the entire problem of plant domestication will, however, be discussed at length by Sauer in volume 5 of the Handbook, it is sufficient to observe here that a considerable number of cultivated plants, whether indigenous or from other parts of America, reached the Andean Highlands at an early date.

The Highlands became the great center of intensive agriculture in South America. The agricultural practices had passed beyond the exploitative stage and reached the point where soils were protected from erosion and systematically built up with fertilizers for maximum utilization. All sections of the Highlands did not achieve this high development of agriculture, but intensive cultivation is nonetheless the basic characteristic of the Andean pattern. It is in these terms, then, that the over-all pattern which distinguished the Highlands from other regions of South America must be defined.

TABLE 1.—*Principal pre-Columbian domesticated plants in the Highland area*

SEED CROPS

Common name	Botanical name	Occurrence
Maize	*Zea mays*	All areas.
Lupine	*Lupinus tauris*	Highlands.
Quinoa	*Chenopodium quinoa*	Highlands.
Cañahua	*Chenopodium pallidicaule*	Highlands.
Amaranth	*Amaranthus* sp	Highlands.
	BEANS	
Kidney	*Phaseolus vulgaris*	General.
Scarlet runner or ayecote	*Phaseolus multiflorus* (or *coccineus*)	Cauca River.
Lima	*Phaseolus lunatus*	Coast.
Jack	*Canavalia ensiformis*	Coast.
	FRUITS	
Pineapple	*Ananas sativus*	Tropical.
Soursop	*Annona muricata*	Lowlands.
Pepino	*Solanum muricatum*	Temperate.
	ROOTS	
Potato	*Solanum tuberosum*	Chile Coast.
Potato	*Solanum andigenum*	Highlands.
Oca	*Oxalis tuberosa*	Highlands.
Ulluco	*Ullucus tuberosus*	Highlands.
Mashua	*Tropaeolum tuberosum*	Highlands.
Achira	*Canna edulis*	Coast; temperate valleys.
Arracacha	*Arracacia xanthorrhiza* (or *esculenta*)	Temperate valleys.
Yacon	*Polymnia edulis*	Temperate valleys.
Sweet manioc (yuca)	*Manihot utilissima*	Tropical lowlands.
Peanut	*Arachis hypogaea*	Lowlands.
Sweet potato	*Ipomoea batatas*	Tropical lowlands.
	MISCELLANEOUS	
Squash	*Cucurbita maxima*	General.
Peppers, ají	*Capsicum annuum*	Medium climates.
Cacao, chocolate bean	*Theobroma cacao*	Low valleys.
Cotton	*Gossypium hirsutum* (var. *punctatum*)	Tropical Coast.
Cotton	*Gossypium barbadense*	Coast.
	NARCOTICS	
Tobacco	*Nicotiana tabacum*	General.
Tobacco	*Nicotiana rustica*	Highlands.
Coca	*Erythroxylon coca*	Warm valleys.

POPULATION

The present population of the total Highland region is about 28,000,000. An accurate estimate of the contemporary Indian population is difficult to secure since the designation "Indian" is as much cultural, linguistic, and economic as it is physical. An estimate by Rosenblatt (1935) covers some of the countries, based on his analysis of the census figures for the year 1930:

Highland Indian population in 1930

	Indian	*Mestizo*	*Total*
Colombia	250, 000	3, 925, 500	4, 175, 500
Ecuador	960, 000	600, 000	1, 560, 000
Perú	3, 711, 140	1, 352, 340	5, 063, 480
Bolivia	1, 890, 000	1, 120, 000	3, 010, 000
Total	6, 811, 140	6, 997, 840	13, 808, 980

That these totals will be somewhat modified in the light of more recent counts is indicated by the 1940 census in Perú, which lists 2,847,196 Indians out of a total population of 7,023,111.

Brand (1941 b) has made a careful estimate of the contemporary Indian groups in Chile, with the following results:

Chilean Indians in 1941

Araucanians	300, 000
Spanish-speaking Indians	100, 000
Aymara and *Uru*	40, 000
Atacameño	4, 000 (?)
Total	444, 000

Forbes (1870, pp. 200–202) made a study of the Bolivian census of 1854 and arrived at a total of 441,746 *Aymara* Indians and 77,480 White and mixed for the 11 Highland provinces. He added to this an estimated 379,884 *Aymara* Indians in Perú, and, after certain reductions for inaccuracies, suggested the round number of 750,000 *Aymara*-speaking Indians for the year 1870. A recent manuscript by La Barre estimates about 600,000 *Aymara* [1] for the year 1935.

It would appear, then, that a conservative estimate of the Indians in the Andean Highland region today would be 6,500,000. Of these, a rough division could be made into 5,500,000 *Quechua*-speaking Indians, 600,000 *Aymara*-speaking, 300,000 *Araucanian*-speaking, and 100,000 miscellaneous. It is also significant that the Indian population, although less than one-quarter of the total for the Andean area, is concentrated in inhabitable sections of the mountains of Ecuador, Perú, and Bolivia, and in south Middle Chile. Consequently, the Indians often form high percentages of the populations of the areas they occupy.

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[1] Tschopik prefers this figure (see this volume, p. 504)

Accurate estimates of the Indian population in the Highlands at the time of the Spanish Conquest are extremely difficult to secure. Various authors have suggested figures ranging from 3,000,000 to 32,000,000, although there is no justification for the latter. In spite of the fact that in the past 400 years many Indians have been either eliminated or absorbed in the Mestizo population, it cannot be directly inferred that the number of Indians at the time of the Conquest was the same or greater than the present census figures indicate. In fact, Kubler (see this volume, pp. 334–340) shows that in Perú and Bolivia the Indian population declined between 1561 and 1796 but started to increase sharply after 1821. Similar decrease and subsequent increase has also been shown for México and Central America.

The earliest official count of the Indian population in Perú and Bolivia was made in 1561 and indicated a total of 1,490,317. This figure is accepted as reasonably reliable by many authors, although they may disagree as to the extent of population loss during the 30 preceding years of active Spanish conquest. Kubler (pp. 339) estimates the 1531 Indian population on a 2:1 ratio as 3,000,000, basing his argument on the situation in México, where the population was only decimated in spite of serious epidemics which did not occur in Perú. Rowe (see this volume, p. 185) estimates the Indian population on a 4:1 ratio as 6,000,000, basing his argument on population decline in certain specific provinces for which figures are available.

Equally detailed evidence is not available for other parts of the Andean region. For Colombia, Kroeber has estimated about 120,000 *Chibcha* at the time of the Conquest, with an absolute maximum of 300,000. (But see p. 893.) This is in startling contrast to many authors who claim at least 1,000,000 *Chibcha*. In view of the fact that the *Chibcha* were the only truly sedentary, concentrated population of Colombia, the total Indian population of that country at the time of the Conquest could not have been large.

Kroeber (1939) has suggested a total of 3,000,000 Indians for the *Inca* Empire, based on an analogy with México and Central America. Willcox (1931) likewise allows but 3,036,000 for the Indian population of the "plateau" district of the Central Andes for 1650. Rosenblatt (1935) cites the following estimates:

Highland Indian population in 1492

Colombia	850, 000
Perú	2, 000, 000
Bolivia	800, 000
Chile	600, 000
Total	4, 250, 000

In brief, although no definitive statement is possible, the Andean population at the time of the Conquest was probably not less than

4,500,000 and not over 7,500,000. Although some have suggested that the Indian population was even greater before the *Inca* expansion, no confirming evidence is yet available.

THE ANDEAN HIGHLANDS AS A WHOLE

The earliest preagricultural inhabitants of the Andean region probably belonged to the Palaeo-American or short, dolichocephalic physical type, although concrete evidence of this is meager. However, the agricultural population throughout the whole Andean area apparently pertained to the Neo-American, or brachycephalic, Mongoloid type, again of medium stature. This physical type is more or less the same as that found throughout Middle America and México in association with the higher civilizations. However, the few detailed studies which have been made indicate that considerable diversity exists in local Andean physical types.

Language classification forms a special section of the Handbook (vol. 5), but even superficially, it is clear that the Andean region was not united linguistically. The problem of classification is particularly difficult in this region since many of the languages died out before they were recorded. Furthermore, the spread of the *Quechua* language in conjunction with the expansion of the *Inca* Empire eliminated much linguistic diversification. Following the Conquest, *Quechua* became a lingua franca used by missionaries and Spaniards and so continued to displace other languages.

In Colombia, languages of the *Chibchan* family were dominant in the Highlands. Many other languages died out, so that many related to *Chocó* may once have been more widely spoken. There is also some evidence of an *Arawak* tongue in Colombia, later replaced by *Chibcha.* *Quechua* replaced many languages in Ecuador, although the *Esmeralda* tongues are known to be distinct and *Cañari* was probably so. Some Ecuadorian languages, such as *Pasto* and *Quillacinga,* seem related to the upper Amazon *Tucanoan* group, and the *Palta* language (this volume, p. 47) may possibly be related to *Jívaro.*

Quechua was spoken throughout most of Perú following the *Inca* expansion. However, the *Aymara* language has survived in the southern Peruvian Highlands and in Bolivia, and apparently at one time had a much wider distribution. Likewise, the *Uru-Chipaya* language, thought by some to be related to the *Puquina,* is still spoken in Bolivia. Although many different languages may once have existed on the Coast of Perú, only the *Mochica* and the *Quingnam* survived long enough for cursory recording. In North Chile and Northwest Argentina, the *Atacameño* (*Kunza*) and *Diaguita* (*Kakan*) languages were prominent, and the *Araucanian* tongues prevailed in Central Chile.

In general, the Highland peoples had a common cultural basis. Wherever possible, the primary subsistence was intensive agriculture, with hunting, gathering, and fishing of secondary importance. Many of the cultivated plants were the same throughout, such as maize, beans, squash, potatoes, sweet potatoes, manioc, and quinoa. Coca and cotton were common additions. Agricultural implements, such as the digging stick and a simple hoe, were used everywhere. Agriculture was the major occupation for men, assisted by the women.

Such crafts as metallurgy, ceramics, and weaving were well developed. The specific emphasis on metallurgy was limited in part by the presence or absence of such metals as gold, silver, copper, and tin in the different areas; but in practically all groups there is evidence of excellent craft skill in manipulating the available materials. The ceramic art includes not only serviceable pottery for utilitarian purposes, but also more elaborately decorated vessels for ceremonial uses. Weaving was probably developed in all parts of the Highlands, although factors of preservation make the evidence somewhat spotty. Such minor crafts as basketry, wood carving, the use of calabashes, and the making of stone and shell articles were common. Building with permanent materials and stone sculpture are not, however, characteristic of the region as a whole.

Reasonably complete clothing of untailored (i. e., uncut), loom-woven materials was typical of the Highlands. The male costume followed the pattern of breechclout and slit-neck shirt, shoulder shawl, and wrap-around skirt. The standard female costume was a wrap-around single garment and a shawl. Most of the groups used some kind of headdress and footgear.

Where the terrain permitted, the emphasis on intensive agriculture led to sedentary and fairly concentrated populations. The village pattern was typical of most of the Highlands, although the growth of true cities was limited. As an accompaniment of the village pattern and the concentrated populations, class distinctions were common. In some groups these distinctions became crystallized into a true caste system. In every major area of the Highlands, political organization over and above the individual villages had developed, and the chiefs or rulers had considerable power and distinction. Such political organization commonly assumed the form of a loose confederacy, and in the case of the *Inca,* and perhaps others, actually achieved the status of a true state.

Formal religious organization, with priests, as distinct from medicine men, specialized cults, and temples, was a characteristic part of the social structure. Throughout the area, burial of the dead was elaborated, not only in the attention to the preparation of graves but also in the quantity and quality of the grave offerings.

This basic pattern, which is generally typical of the Highlands, is demonstrably old, at least in the Central Andes. The major characteristics are found in the archeological remains of the earliest agricultural periods yet discovered in Perú and Bolivia, and certainly extend back to a time at least approaching the beginning of the Christian Era. In spite of the antiquity and wide spread of this pattern, numerous cultural divisions are apparent in the total area considered. The basis for these divisions, which involves geographic and temporal factors as well as cultural ones, is discussed in the next section.

HIGHLAND CULTURAL DIVISIONS

The countries included in the Highland region can be analyzed in terms of the factors favoring the development of the Highland cultural pattern, as outlined in the preceding pages. Some of these are environmental factors, since intensive agriculture is basic, such as availability of flat lands in which the soil is both rich and workable with simple tools, that is, not covered with natural vegetation too difficult to remove. The climate should be genial and preferably of seasonal contrasts with ample rainfall. In some areas, the availability of grazing land is of considerable importance. In the mountains, altitude zones are significant. Four zones can be distinguished, although the foot elevation differs in terms of latitudes: tierra caliente, generally below 3,000 feet (about 900 m.); tierra templada generally 3,000 to 6,500 feet (about 900 to 1,700 m.); tierra fria generally 6,500 to 10,000 feet (about 1,700 to 3,000 m.); and the punas or páramos, generally 10,000 to 15,000 feet (about 3,000 to 4,500 m.). The snow line starts at about 15,000 feet (4,500 m.). From the point of view of cultural factors, the territory should have sufficient protection to permit normal, uninterrupted growth, but, at the same time, should not be too isolated for the exchange of ideas with neighboring groups.

Some favorable sections exist in all the Andean countries, and it is known both historically and archeologically that reasonably advanced agricultural groups occupied these regions. Thus, from one point of view, the Highlands form a unit which stands in contrast to other regions of South America. Nowhere does the pattern, so characteristic of the Andes, penetrate to any great extent into the tropical jungle or the temperate grass plains. Although agriculture is also characteristic of the Amazon region, the cultivation techniques and the orientation of other cultural features around the agricultural subsistence is quite distinct.

In spite of the basic Highland unity, it is obvious, even on superficial examination, that all sections did not achieve the same intensity of development. These differences cannot be wholly explained in terms of the geographical environment. The large intermont basins of the Eastern Cordillera of Bolivia did not foster the same cultural advance as did the more bleak altiplano. The tribes of the fertile Central Valley of Chile were culturally behind those of the more limited Coastal valleys of Perú. The region of the greatest cultural intensity was in the Central Andes, that is, the Highlands of Bolivia and the Highlands and the Coast of Perú. The intensity decreases to the north and to the south. However, within the Highlands some cultural divisions are not based merely on the decreasing intensity of this Central Andean pattern, but rather have a different scheme of orientation. Since the subdivisions of Andean cultures are not constant throughout the total history, they must be discussed in terms of specific time periods.

One convenient period is that which immediately preceded the Spanish Conquest. The Conquest was relatively rapid, occupying less than 50 years, so that an immediate pre-Conquest Period represents a more or less consistent calendrical date. In this period, then, there were three distinctive cultural divisions in the Highlands. First and foremost was the *Inca* pattern, which extended from the southern border of Colombia through Ecuador, Perú, Bolivia, Northwest Argentina, and south to the Río Maule in Chile. In spite of the fact that in much of the area the *Inca* conquest was completed but a short time before the arrival of the Spaniards, the cultural pattern was rather thoroughly established throughout the total Empire. The second major division, the *Chibcha*, was in the Eastern Cordillera of Colombia. *Chibcha* organization had not reached empire proportions, so that many of the smaller groups in Highland Colombia were in part independent units. The *Araucanian* pattern in Chile is the third major division. Although in part conquered by the *Inca* and strongly influenced by them, a distinctive culture was maintained, particularly by those groups living in the rain forest of southern Central Chile. Special articles are included elsewhere in this volume on the *Inca*, the *Chibcha*, and the *Araucanian* at about the time of the Conquest, as well as one on the Colonial Period in terms of its effect on Indian cultures.

The effect of European conquest and later Colonial history was profound and extensive. In some regions, such as Colombia, the native cultures were virtually eliminated and the population roughly assimilated. In other areas, like Perú, the Indian cultures went through a long period of upheaval before they settled down into new and highly modified patterns. In Chile, the *Araucanians* put up stiff resistance but obviously not without great modification of their earlier cultural pattern.

The cultural divisions among the surviving Indian groups of today are quite distinct from the pre-Conquest Period. Three subdivisions can be recognized in the region of the old *Inca* Empire, although the distinctions are based more on linguistic differences than on striking cultural contrasts. The first division includes the *Quechua*-speaking Indians of Highland Ecuador, Perú, and the Eastern Cordillera of Bolivia. The culture is a blend of the old *Inca* pattern and Western civilization. The second group consists of the *Aymara*, who are located in the altiplano of southern Perú and Bolivia. The *Aymara* have resisted assimilation by the *Inca* and the Colonial Spanish, and the modern Bolivians and Peruvians. A third division, of minor importance, includes the *Uru* and *Chipaya* Indians along the Desaguadero River in Bolivia, who speak a distinct language and have a few distinctive cultural characteristics. In Chile, the old *Araucanian* pattern still survives and can still be distinguished from those of Perú and Bolivia. In Colombia, the *Chibcha* pattern has disappeared and only small groups remain, such as the *Cagabá* in the Santa Marta region, and the *Páez* and *Coconuco* in the southern Highlands. Again, special articles have been written for this volume on all these contemporary Indian groups.

The cultural divisions of the Highlands in pre-*Inca* Periods are harder to generalize, since archeological sequences have not been satisfactorily established for all the area. However, from the special articles on the archeology of Colombia, Ecuador, Perú-Bolivia, Northwest Argentina, and North Chile, some idea of the diversity can be gained. In general, it appears that immediately before the *Inca* started their political expansion, cultural subdivisions would distinguish Ecuador, Northwest Argentina, North Chile, Central Chile, the Eastern Cordillera of Bolivia, and one or more regions of Colombia. In still earlier periods, it is probable that the number of divisions would be greater although the corroborating evidence is scanty.

On the basis of present evidence, an intensive development of culture can be clearly demonstrated for the Central Andes, that is, most of Perú and Bolivia. Many of the characteristics of this central region have not as yet been discovered elsewhere. Furthermore, the basic elements of the pattern are demonstrably old in terms of Highland archeology. From one point of view, the Central Andean region can be divided into geographical subdivisions and time periods. However, from another point of view, the area is closely united. The contrast of Coast and Highland, and the distance between either Highland basins or Coastal valleys, permitted the rise of numerous local styles. At the same time, the various groups were in some contact with each other at all times. Archeological evidence demonstrates the importance of trade. Tribes of the Highlands received Coastal cotton in return for wool from their domesticated llamas and alpacas. Foods were exchanged so that an Indian group had the benefit of a wide variety of food plants, even those which could not be cultivated in its own territory. The Central Andean cultures were further united by such pan-Peruvian periods as Chavín, Tiahuanaco, and *Inca*, whether such periods represented political conquest or merely widespread culture diffusion.

Other cultural divisions can be recognized in the Southern Andes, here defined as the Highland areas south of the central section. The Southern Andes include the *Atacameño* and *Diaguita* of North Chile and Northwest Argentina, and the *Araucanians* of the Central Valley of Chile. Although much of this area was ultimately conquered by the *Inca*, distinctive cultural features are readily observable in it. Finally, the Northern Andes, which include the Highlands of Ecuador and Colombia, present other distinctive cultures, of which the *Chibcha* is the most outstanding.

The articles in this volume of the Handbook and the sequence of discussion in the present introduction follow this order: Central Andes, Southern Andes, and Northern Andes. There is no question that the Central Andes were a major center of distribution, and perhaps of origin, of many of the elements of higher civilization. The arrangement of the articles in terms of the gross divisions of the Andes just mentioned, however, seems a more suitable sequence than one based on the relative intensity of the basic Andean cultural pattern in each area.

In the following pages each major area is described geographically in terms of its suitability for the development of the basic Highland cultural pattern. Some of the major changes in habitation pattern resulting from European occupation are indicated. Finally, the cultural picture is presented briefly as an introduction to the detailed descriptive papers which follow.

THE CENTRAL ANDES

THE ENVIRONMENT

The Central Andean region includes all the mountainous area of Perú except the extreme northern part, the Coast of Perú, the altiplano, and the Eastern Cordillera of Bolivia. As previously mentioned, this large area can be treated as a unit in spite of considerable cultural, linguistic, and environmental diversity.

Perú is commonly described by geographers in terms of three vertical strips: the west Coast plain along the Pacific, noted for its aridity; the high Andes; and the eastern Montaña, which fades into the plains of the Amazon. The west Coast and the mountain region were united under *Inca* rule at the time of the Spanish Conquest, and both areas had elaborated the Andean culture pattern long before this. This pattern was never successfully established in the Montaña region, in spite of some cultural exchange between the Andean and the upper Amazonian peoples.

The distinctive feature of the Peruvian Andes (James, 1942, p. 145) is a high level surface with gentle slopes, generally between 10,000 and 15,000 feet (about 3,000 to 4,500 m.) in altitude. Much of this territory is either too high for agriculture or has been badly denuded by erosion. Above this high level surface rise the rugged peaks of the Andes, many of them permanently snow-covered. In Perú, unlike Colombia and Ecuador, the Andes are not arranged in parallel ranges; rather they are composed of a number of discontinuous chains, which generally run diagonally in a northwest–southeast direction. North of Cajamarca, rainfall is more or less continuous throughout the year, and the surfaces are characteristic páramos. The central and southern region, however, has distinct dry and rainy seasons, producing typical punas. The continental water divide is close to the Pacific Coast in many places, so that in the Peruvian Andes are the headwaters of rivers which flow to the Amazon and, ultimately, to the Atlantic. Three major river systems drain these Highlands, namely, the Río Marañón in the north, the Río Huallaga in the center, and the Río Ucayali in the south. These rivers and their numerous tributaries originate in the high mountains, cut their way slowly across the rolling high level surface, and then rush downward through deep canyons to the eastern plains. Along the rivers are innumerable pockets of flat lands where agriculture is possible, so that an analysis of the best regions of habitation is exceedingly difficult to make. Romero (1939, p. 110) lists 22 principal valleys in the mountains, and this number could easily be doubled in terms of the principal habitation areas of Indian culture, past and present. However, some of the outstanding centers of population concentration can be mentioned.

In the north, the contemporary town of Cajamarca, located in a high intermont basin, is a focal center of concentrated population for a region which includes many small units along the tributaries of the Río Marañón. The Marañón itself has numerous small clusters of population from its headwaters at Huánuco on down, and might be considered a secondary center.

Another important center in the north is the Callejón de Huaylas, actually the upper extension of the Río Santa. The Santa originates in a high marsh and flows northward, flanked on both sides by mountains. Intensive agriculture has long been practiced in this wide and fertile Highland valley.

An important center is in the central Highlands behind Lima in the flat valley of the Río Mantaro. The largest basin is that of Huancayo, some 40 miles (64 km.) long by 10 to 12 miles (16 to 19 km.) wide and about 11,000 feet (3,300 m.) in altitude.

The Cuzco region is one of the largest centers of population. Here the three basins of Cuzco, Urubamba, and Anta have an average elevation of about 11,000 feet (3,300 m.), and have long been intensively cultivated. This was the area that became the focal center of the *Inca* Empire.

The Puno district in southern Perú is part of the high altiplano which extends into Bolivia. Although the altitude of around 13,000 feet (3,900 m.) is too high for the cultivation of maize, potatoes and quinoa are planted, and the surrounding puna is one of the ideal regions for herding llamas and alpacas (pl. 5, *center;* pl. 6). Again this has long been a densely settled area. A final center of importance was the fertile region around Arequipa in southern Perú.

These principal centers of Highland settlement were important units in the archeological past. Distinctive styles and achievements can be demonstrated for Cajamarca: Chavín on the Río Marañón (pl. 7), the Callejón de Huaylas, the Río Mantaro section, Cuzco, and Puno.

The names of many tribes in Highland Perú have been recorded. It is difficult to evaluate the importance of these tribal units in view of the fact that all were incorporated in the *Inca* Empire. Markham (1871) lists 63 tribes for the Highlands, and Tello (1942) mentions an equally large number. Rowe (this volume, pp. 186–191; map 3) presents a detailed list of 44 tribes together with a map showing their locations. Each of the major centers of settlement in the Highlands was important in *Inca* times. One or more names of outstanding tribes can also be associated with each center, such as the *Cajamarca* and *Huamachuco* around Cajamarca, the *Huayla* in the Callejón de Huaylas, the *Huanca* in the Mantaro, the *Colla* around Puno, and the *Arequipa* around the town of the same name. The extensive Cuzco region was the classical center of the *Inca* tribes of which numerous subdivisions are recognized.

In résumé, throughout Highland Perú, numerous small areas were utilized for intensive agriculture and grazing, and five or six large areas were suitable for maintaining concentrated population. Although most of these areas lie between 7,000 and 13,000 feet (2,100 and 3,900 m.) above sea level, the basic subsistence was agriculture, with emphasis on quinoa and potatoes in the higher altitudes, and on maize in the more favorable localities. The grazing of alpacas and llamas was important where the punas could be used for pasturage. The major population clusters were sufficiently isolated from each other to permit independent development, but contact with neighboring groups was constant, and, in general, there was a tendency toward political expansion over wide areas.

The Pacific Coastal desert is a marked contrast to the high Andes. Twenty-five principal streams originate in the mountains and cut their way to the Pacific. Intensive agriculture is possible on the river flats, particularly with the aid of irrigation. In northern Perú, the streams are usually larger and there is more direct rainfall, so that irrigation is of less importance. To the south, the desert increases in aridity, and the need for irrigation is augmented. The Coastal plain is much wider in the north than in the central region, and in the south the streams cut through a low Coastal range, so that the cultivated lands are somewhat back from the actual coast line. On the Coast, then, each valley tended to be an independent cultural unit, since each is separated from the next valley not only by an average of about 25 miles (40 km.) of barren desert, but also by mountain spurs which run into the Pacific. Archeologically, each major valley did have an independent history, but at the same time adjacent valleys influenced each other and were frequently united in a single political system.

The identification of the tribes which inhabited the Peruvian Coast is most unsatisfactory. (See map 3, and p. 191, this volume.) The *Inca* applied the name Yungas to the whole Coastal region, and but few records of any specific subdivisions have survived. Rowe (this volume, p. 191) gives a list of the major valleys and where possible the names of the tribes in each. Tello (1942) lists the principal tribes and their locations as follows: The *Chimu* occupied the valleys from Tumbes to Pativilca. Within this area he locates the *Tumbez* (*Tumpiz*) in Tumbes Valley; the *Tallán* in the Chira and Piura Valleys; the *Chimu* in the Leche, Lambayeque, Saña, and Jequetepeque Valleys; the *Muchik* in the Chicama and Viru Valleys; and the *Wayla-Yunga* (*Huayla*) in the Santa, Nepeña, Casma, Huarmey, Paramonga, and Pativilca Valleys. The *Yauyo* occupied the central Coast in the Huaura, Pacasmayo (Chancay), Rimac, Lurin, Mala, and Huarco Valleys. The *Chukurpu* (*Chocorvo*) were in the Chincha, Pisco, and Ica Valleys, and the *Rucana* occupied the Nazca Valley. Farther south, specific tribal designations are missing, but the name *Chango*, referring generally to fishing populations, is applied. (See Bird, this volume, p. 595.)

About two-thirds of Bolivia is in the eastern lowlands and one-third in the Andean Mountains. The northern part of the eastern plains is in the Amazon River drainage and characterized by a Tropical Forest environment and culture pattern. The southern part lies in the Río Paraguay drainage, in the dry grassland and bushland country known as the Gran Chaco. There are some records of *Inca* hunting parties entering the Chaco, but neither this area nor the tropical lands to the north were occupied with any effectiveness by the Andean people.

The western border of Bolivia is flanked by the Cordillera Occidental, in part a continuation of the volcano belt of southern Perú. Only a few rivers originate in this Cordillera and flow westward to the Pacific, and intermont basins are rare. The rugged mountains and an excessively dry climate discourage occupation by agriculturalists.

Between the Western Cordillera and the Eastern are a series of high intermont basins collectively called the altiplano. Lake Titicaca occupies the northern part along the Peruvian border. In this section rainfall is ample. However, the desert belt of the Coast of Perú and North Chile cuts across the Andes at about lat. 20° S. Consequently, much of the altiplano, as well as the adjacent mountains, is excessively arid, and unsuitable for extensive habitation. In fact, the flats south of Lake Poopó are great salt plains.

The Lake Titicaca Basin is one of the major centers of population concentration (pl. 3). The lake itself is at an altitude of 12,500 feet (3,750 m.) and most of the surrounding territory is even higher. However, the lake is of sufficient size and depth to ameliorate the climate so that even maize can grow in this high altitude. The flats surrounding the lake, the islands in the lake, and the mountain slopes on both sides have long been subject to intensive cultivation. Archeologically, this region was the center of the Tiahuanaco civilization, which was not only remarkably advanced in technology but also spread its influence and, perhaps, a political control over a large part of Perú and Bolivia. This basin has long been occupied by the *Aymara* (or *Colla*) Indians, who, in spite of a long period of *Inca* domination and over 400 years of European contact, have managed to maintain both their language and much of their native culture.

Along the banks of the Desaguadero River, which flows from Lake Poopó to Lake Titicaca, are small scattered settlements. Although not an area of concentrated population, it is of interest because it is occupied by the *Uru-Chipaya* Indians. (See this volume, p. 575.) The language of this group differs from both *Aymara* and *Quechua*. Some authors classify the language with *Puquina*, which was once rather widespread on the North Coast of Chile and the South Coast of Perú. Immediately east of Lake Poopó, the river valleys which drain toward the lake are rather densely occupied in their upper basins by the *Aymara* Indians.

The Eastern Cordillera, a continuation of the Peruvian chain, branches eastward to form the maximum width of the Andes, about 400 miles (640 km.). Rainfall is ample in the north, but, toward the south, the mountains are arid. Relatively large intermont basins are found in this region as well as flat pockets along rivers which form part of the Amazon or the Paraguay drainage. The high surfaces between basins are typical puna country excellent for grazing, although it is rather badly eroded toward the east. The Eastern Cordillera has long maintained concentrated population clusters. The basin of Cochabamba, at 8,500 feet (about 2,550 m.) altitude, supports one of the most densely populated rural areas of Bolivia today, and presumably did the same in the past. Other important centers are found in the somewhat smaller basins of Sucre and Tarija, and elsewhere throughout these mountains are numerous secondary population clusters. These are only a few names of the tribes which occupied these centers in pre-*Inca* times, such as the *Cochapampa* and the *Yampara* (in Sucre). Today the region is dominated by *Quechua*-speaking Indians.

From a geographical point of view, the large basins of the Eastern Cordillera would seem ideal for the growth of a high civilization based on the Andean pattern. There is no doubt that the region was rather intensively occupied in pre-*Inca* and *Inca* times. Archeological studies, although incomplete, confirm the importance of each major basin. However, there is virtually no evidence of large cities, great public works, or outstanding building units. *Inca* remains consist mainly of forts or fortified towns located strategically throughout the area. Pre-*Inca* remains include well-made ceramics, metalwork, indirect evidence of advanced weaving, and well-prepared graves, but in spite of the fact that much of this material is related to the Highland Tiahuanaco center in the altiplano, there is no associated dressed-stone masonry or significant stone carving.

A final region of Bolivia, the Yungas, has been important, both in the past and present, for the growing of coca. The Yungas lies on the Amazonian side of the Eastern Cordillera in the Montaña, where there is great variation of climatic and vegetation zones. In spite of many potential developments, gold and coca are still of leading importance in the area, although it has never been a center of concentrated population. The tribes of this area will be described in the Handbook, volume 3.

Four centuries of European contact have done little to change the centers of population concentration in Perú. In the Highlands, the introduction of barley, wheat, goats, and sheep added some variety in the use of land, but did not materially change the amount of land previously utilized nor create new centers. Large-scale mining operations have formed new population clusters, particularly in the area just south of Cajamarca and in the central mountains behind Lima. However, the mining towns have been added without displacing the older population centers. In the Coastal valleys, commercial crops, such as sugarcane, rice, and cotton, have replaced the earlier types of land usage, but such change has, if anything, reduced rather than increased the amount of land under cultivation. The growth of industry has enlarged urban centers like Arequipa and Lima.

Although population centers have changed but little, the Indians have been displaced in many areas. The major displacement has occurred on the Coast of Perú. This can be explained in part in terms of transportation. Water transportation was poorly developed by the Indians, even by those living along the Coast. Consequently, geographical unity was determined by land transportation facilities. The principal roads ran north to south, both along the Coast and in the Highlands. The Spaniards emphasized water transportation, essential in a colony attached to the mother country by trade. The north-to-south roads were neglected, since the Coastal valleys were now united by shipping, and the problem in the mountains was that of transporting produce to the nearest port. In the Indian economy, the mountains were not isolated regions, but from the time of the Conquest up to the present, they have become more and more so. Historically, the west Coast has become the major region of European settlement and economy. At the present time, the Indian cultures and languages have almost completely disappeared in the Coastal valleys of Perú. The Indians have either withdrawn to the mountains or have been absorbed in the growing Mestizo population. In the mountains, however, the Indians are still dominant, forming in many districts up to 80 percent of the total population and retaining their language and much of their old culture.

Western civilization has caused a number of changes in the Bolivian habitation pattern, although not to the extent of seriously displacing the Indian population. Important mining communities are now located in many parts of both the Eastern and Western Cordilleras. Towns like Potosí are based almost exclusively on mining, and the famous tin mines of Uncia concentrate population in a region which could not otherwise support it. In the Titicaca Basin, the *Aymara* Indians continue their old cultural traditions with little change, but in the Eastern Cordillera, European penetration has been greater. The large basins were ideal for planting barley and alfalfa, and for cattle grazing. Many of the Indians of this area have become westernized in the sense of adopting the Spanish language and relinquishing their communally held land to become tenants and peon workers on farms.

CULTURAL TRENDS

Descriptive résumés of the cultures of the Central Andean region at different time periods are presented in various articles in the Handbook. The purpose of this analysis is to trace, insofar as possible, the antiquity of some of the major features of the pattern, the changes which occurred in them throughout the historical Colonial Periods, and their survival, modification, or disappearance in the present. For this purpose, the total known history of the Central Andean region can be considered in the framework of a dozen time periods, by combining the archeological and recorded historical evidence.

Time Periods of Central Andean region[1]

12. Modern Period (*Quechua, Aymara, Uru*).
11. Middle Republican Period (ca. 1884–).
10. Early Republican Period (ca. 1821–).
9. Late Colonial Period (ca. 1750–).
8. Mature Colonial Period (ca. 1650–).
7. Early Colonial Period (ca. 1572–).
6. Conquest Period (ca. 1532–).
5. *Inca* Periods (ca. 1400–).
4. Late Periods (ca. 1200–).
3. Tiahuanaco Middle Periods (ca. 900-).
2. Early Periods (ca. 600–).
1. Chavín Periods (ca. 300–).

[1] The historical divisions and dates are explained and elaborated by Kubler (see this volume, pp. 340–354). The archeological divisions follow the article by Bennett (see this volume, p. 74). The archeological dates must be considered as only gross approximations.

Unfortunately, information is not yet available to allow a detailed study of trends throughout all the 12 divisions. In considering antiquity, the standard archeological limitations are encountered. On the dry Coast, preservation is excellent and many details of the cultures are known. In other areas, the rains have destroyed all perishable objects. Some art styles, like that of the Early Periods on the North Coast, emphasize cultural details in the pictorial and modeled designs. In other periods the designs reveal little of the life of the time. In some regions, much archeological work has been done, and in others, practically none. Since archeological interpretations of social culture are at best hazardous, the emphasis has been placed on material aspects of culture.

Information about the *Inca* culture and later Indian history is likewise uneven. On some aspects, information is detailed; on others, completely absent. Even studies of the contemporary Indians are few in number.

The *Inca* culture at the time of the Conquest is a convenient pivotal point for examining the trends. *Inca* culture marks the culmination of the archeological sequences. Following the Conquest, the problem becomes one of acculturation. Consequently, in the following analysis features of the *Inca* pattern are considered first in terms of their antiquity in archeological time, then in terms of modifications and changes during the historical periods, and, finally, in terms of their survival among the contemporary Indians.

SUBSISTENCE ACTIVITIES

Inca civilization, like the Highland pattern elsewhere, was based on intensive agriculture. Practically all of the plants cultivated by the *Inca* at the time of the Conquest had long been known. In the Early Periods there is convincing evidence of maize, squash, beans, cotton, sweet potatoes, peppers, peanuts, manioc, coca, quinoa, cañahua, potatoes, oca, achira, mashua, ulluco, jíquima, yacón, and lupines. Likewise, many domesticated fruits were known in the Early Periods, such as pepino, pacae, lúcuma, tuna, algarrobo, chirimoya, guanábana, tumbo, papaya, pineapple, palta, and melons. In other words, basic plants and fruits were known at an early date, and throughout the archeological history no significant new plants or fruits were added. To be sure, planting depended on the local environment, since many parts of the Andes although too high for maize were still suitable for potatoes, oca, and quinoa.

Agricultural techniques seem equally ancient. Irrigation was common on the Coast of Perú by the Early Periods. Terraces for soil conservation can be identified with the Tiahuanaco Periods in Bolivia, and a knowledge of fertilizers, crop rotation, and letting land lie fallow is probably old, although this is hard to demonstrate archeologically. Cultivation with a digging stick and a hoe occurred throughout. In the Late Periods digging sticks were provided with cast-metal points, and the classic *Inca* taclla, a digging stick with footrest and handle, may have been invented by then.

Cooperative labor was a typical feature of the *Inca* system. Many individuals worked together on the state and church lands as well as on public works. Agricultural labor on the individual plots was also cooperative through the system of aine, that is, the borrowing of labor with the fixed obligation to return an equivalent amount. In all probability, cooperative labor is an ancient custom.

In the *Inca* Periods agricultural practices were closely associated with such religious activities as curing the fields, basing ceremonies on the agricultural cycle, and symbolic worship of food. In Mochica archeology of the Early Periods, there is also evidence of similar religious association: anthropomorphized plants, pictures of plants being worshiped or carried by gods, and food placed in graves.

The preservation and storing of food was important to the *Inca*. Some foods were dried, others were frozen. These techniques are probably old although this is difficult to prove. At least, storage bins containing quinoa and cañahua have been found in the Early Chiripa Period. Finally, there is some evidence for the antiquity of the standard dishes made from maize, potatoes, meat, and the like.

The chewing of coca with lime was practiced by the Early Period people, who probably made the maize beer, chicha, too. The *Inca* made little use of tobacco, except as a medicine, and there is no archeological evidence, such as pipes, that smoking tobacco was ever a custom. However, in the Tiahuanaco Period in Bolivia, as well as in the *Atacameño* of North Chile and Northwest Argentina, carved tablets and tubes are found which were used for tobacco or parica snuff.

Llamas and alpacas were important domesticated animals in all the Early Periods, and were known in the Chavín Periods. These animals were always an important addition to the Central Andean cultures, because of their usefulness for wool, meat, transportation, hides, fertilizer, fuel, sinews, and bones. Furthermore, both animals graze in the high punas, thus allowing large stretches of territory to be profitably utilized which were unsuitable for agriculture. The dog and the guinea pig are other domesticated animals known in the Early Periods.

Hunting was secondary to agriculture and herding in the subsistence pattern. In the *Inca* Periods, group round-ups at certain times of the year were as much a sport for the *Inca* caste as a source of meat supply. The Early Mochica Period ceramics, however, show quite a number of hunting scenes, so that it may once have been more important. These scenes illustrate the use of nets for surrounds, hunting with dogs, and, less certainly, the practice of tracking and running down deer on foot.

Along the Coast and around Lake Titicaca, fishing was important. There are large shell heaps along the Coast, some dating from the Chavín Periods, others undated. Fish and other forms of marine life are prominent in the Early Mochica and Nazca designs, and the small fish of Lake Titicaca are frequently depicted on Tiahuanaco stone carving. Fishing with hook and line was common in the Early Periods. Both hunting and fishing were important in the Coast Chavín Periods.

Although wild plants, fruits, and seeds may have been of considerable importance at one time, the domestication of such a wide variety of fruits and plants reduced collecting and gathering to secondary subsistence importance in the Central Andean pattern.

The Europeans affected the Indian subsistence pattern by the introduction of new plants, new fruits, new domesticated animals, and new agricultural techniques. The most important new plants were wheat, oats, barley, rice, and a number of garden crops. Oranges, grapes, and bananas were important new fruits. Some of the animals were cattle, horses, goats, sheep, burros, and pigs. The ox-drawn wooden plow was the most important new technique. These introductions changed but did not eliminate or destroy the indigenous subsistence pattern. Indians were obliged to accept European plants and animals in order to pay tribute in kind. However, many Indians kept these tribute activities distinct from their own consumption needs. Other immediate consequences of the Spanish Conquest threatened to be more serious. The irrigation systems were neglected, and the public granaries maintained by the *Inca* were no longer supported. Much of the agricultural population was shifted for work in the mines or elsewhere. Attempts were made to centralize the Indians in urban centers, thus moving them far from their farm lands. In order to avoid the tribute taxes, many Indians deserted their traditional land to join the servant or hired-worker class. Towns were built on land which formerly had been used for planting, and large herds of European animals were allowed to pasture on land suitable for cultivation. Llamas and alpacas were wantonly destroyed. Ultimately, much land which had previously been used for subsistence crops was shifted to commercial crops.

The Indians who still occupy the Highland region of Perú and Bolivia today maintain much of the old subsistence pattern. Most of the old Highland plants are still cultivated, although oats and barley are common additions. Many of the plants introduced by the Spaniards were not very adaptable to high-altitude farming. The ox-drawn plow is in common use on flat terrain, but there is still no substitute for the Indian digging stick and hoe for the more rugged country. Preservation of food by drying and freezing, and the standard dishes prepared are part of the old pattern. The Indians have accepted some of the European animals, but the llama and the alpaca are still their favorites. In spite of systematic attempts to eliminate them, old religious concepts still accompany Indian agricultural practices. The fields are cured ceremonially and charms are planted in the corners of the fields to secure better crops. The aine system of labor exchange is still common practice, as well as larger-scale cooperative labor on public work projects.

WEAPONS AND WARFARE

The success of the *Inca* conquest of the Central Andean region was due to superiority of military organization and tactics rather than superiority of weapons, since the principal weapons of the *Inca* Period were in common use throughout the major archeological periods. Spear throwers and darts, wooden spears, clubs with stone or metal heads, bronze battle-axes, and slings date back at least to the Early Periods. *Inca* swordlike wooden clubs and short wooden daggers go back to the Middle Periods. The *Inca* protective devices, such as square or round wooden shields, padded shirt armor, and padded helmets of cloth or wood, are likewise depicted in the Early Mochica ceramic designs. Although the *Inca* made occasional use of the bow and arrow, it was not a common weapon. In the pre-*Inca* periods there is no evidence that the bow and arrow was ever important in this area, in spite of the fact that it would seem like a superior weapon for such open country. Some periods had weapons not used throughout the history, such as the wooden club with an enlarged head, slightly pointed at the end, used by the Mochicas, but these are minor in importance.

The *Inca* made occasional use of the bola for hunting and probably acquired this from their contacts with the plains tribes of Argentina. Archeologically, the bola also occurs in the aberrant Early Chiripa Period in Bolivia but is not found elsewhere. The *Inca* are also described as using a blowgun for shooting birds, but this weapon is not typical of the Central Andes. Some Early Mochica vessels, however, depict hunters shooting birds with a weapon resembling a blowgun.

Specialized groups of warriors are depicted on Early Period ceramics, and some of the Early Mochica modeled vessels probably represent war chiefs. In the *Inca* Periods, the army was led by professionals and the drafting of all able-bodied men was common. Fortifications are prominent throughout the archeological history, although more clearly identified from the Tiahuanaco Middle Periods onward. Widescale conquests were undertaken before the *Inca*, as illustrated by the expanse of the *Chimu* confederacy in the Late Periods. Previous to this, warfare seems to have been more of a local affair in the different geographical subdivisions. Much of the conflict was a type of hand-to-hand, individual fighting. It was the *Inca* who originated mass armies and mass attack.

Trophy heads are represented in the Early Periods of Mochica, Tiahuanaco, and Nazca. Although a number of specimens have been preserved, none is of the shrunken-head type so characteristic of the *Jívaro* Indians.

The *Inca* military expansion was most successful against peoples of about the same cultural achievement, and in territory similar to their own. They were less successful against the tribes of the tropical Amazon, the open plains, and the Chilean rain forests, all of whom used different methods of fighting and different weapons. The *Inca*, however, were able to hold their own territory against other Indian groups.

The Spanish Conquest was made possible in part by superior weapons. Although defending their own territory, the *Inca* were unable to compete with the mounted cavalry troops who used swords and lances, or with the foot soldiers and their firearms. Furthermore, the *Inca* never realized the advantage of ships for moving troops and supplies. In the Conquest Period, the resisting Indians soon adopted Spanish weapons. In the following periods, the Spaniards forbade the Indians to carry or possess arms of any effective kind. Today, most of the old weapons have completely disappeared although there is still some use of slings and bolas. The Indian military organization no longer exists, although as late as 1780 large-scale rebellions occurred.

TRANSPORTATION

Watercraft was always poorly developed in the Central Andean region, owing in part to the lack of good materials. Small balsas, really rafts made of cigar-shaped bundles of reeds turned up at one or both ends, were in use from the Early Periods onward, and flat rafts were also known. The use of sails on either type is still debated. In spite of their relative ineffectiveness, the balsas are still in use today both on the north Coast of Perú and on Lake Titicaca.

Land transportation was, however, well advanced. In the *Inca* Periods, roads were maintained throughout most of the Empire. In some places only markers were set up to indicate the proper trail, but in rough terrain the roads were paved with flagstones, and large steps were cut out of the native rock. Suspension cables and stone bridges were built over gorges. Small houses (tambos) were built at intervals along the principal highways for the convenience of travelers and for stationing special runners. Probably both roads and bridges were maintained in pre-*Inca* periods, although identification is difficult. Some roads are attributed to the Mochica culture.

The *Inca* organized a system of relay runners, called chasquis, who carried messages over great distances in a comparatively short time. Larco Hoyle (1939 and this volume, p. 175) has demonstrated that some of the figures depicted on Mochica ceramics of the Early Periods also appear to represent runners carrying messages.

In Spanish times, the road system was considerably modified because of transportation on horseback and with pack animals rather than on foot and with llamas. Likewise, the Spaniards were most interested in roads which led from the mountains to the coast rather than in those running north and south. However, the series of rest houses along the highways were maintained in Colonial times and still exist today.

Archeological evidence confirms wide-scale trading. Presumably a reasonable amount of travel for trading purposes was common. The *Inca* limited travel privileges for most of the people, except in terms of government business and army duty. Wide-scale mobility, however, marks the historical periods. Large numbers of Indians withdrew from their traditional centers, either under pressure of war or voluntarily. Many Indians joined the migrant yanacona labor group to escape taxation. The Indians are less mobile today although travel is still considerable.

ARCHITECTURE AND BUILDING

Large-scale building was a unique characteristic of the Central Andean pattern. These large building projects might be for religious constructions, that is, pyramids or temples, for palaces of the rulers, for fortifications, or for public works such as irrigation systems and roads. All categories are characterized by the large scale of the work and the necessity for well-organized labor. Irrespective of detailed differences, such large-scale construction is found in the Chavín Periods, in the Early Periods of Tiahuanaco and Mochica, and in all the Middle, Late, and *Inca* Periods. In the beginning the emphasis was placed mainly on religious structures, but later large-scale public works, fortifications, and palaces were also constructed.

The planning required for constructing many of these buildings suggests that specialists in architecture existed from the Chavín Periods onward. The models of buildings found at Tiahuanaco are direct evidence of such advance planning.

Building was normally done with adobe brick on the Coast, and with stone in the Highlands, although there are many exceptions. The fact that adobe buildings endure well on the dry Coast but not in the rainy Highlands probably influenced the architects. The technique of smoothing and dressing stone was known in the Chavín Periods and characterizes the Tiahuanaco and *Inca* Periods. The construction of interior galleries and chambers was particularly characteristic of the Chavín and Recuay Periods, but was occasionally employed in later times. However, such specialized stone-masonry devices as notches, jointing, and copper cramps were essentially limited to the Tiahuanaco Period in Bolivia. Likewise, the architectural use of stone carving was prominent only in the Chavín and Tiahuanaco Periods. Until the *Inca* Periods, no extensive use was made of the corbeled arch for stone roofing, although the principle was known in the Chavín Periods.

Many types of adobe brick were used on the Coast, and a good period sequence has yet to be established. Hand-made, conical adobes were used in the Chavín Periods, but by the Early Mochica Period rectangular mold-made adobes were common. In later periods, a preference for hand-made or mold-made adobes represents a regional rather than a time difference.

The common dwelling house, irrespective of the period or the material used in building, was a small, rectangular unit, suitable for a single family. Rarely, round houses were made, but these were not characteristic of any particular period. The house interior was simple, with, perhaps, some pegs and niches in the walls and, more rarely, a stone partition. Two-story dwellings are found at some sites, particularly in the *Inca* Periods. In general, the Early Periods are characterized by isolated house units or clusters of houses in small villages. In the Late Periods, true cities were built. Some of these are of large size and include streets, reservoirs, gardens, pyramids, and defense walls. These were lay cities, not religious centers as in México. The *Inca* continued this large-scale pattern.

The Spaniards maintained many of the Indian villages and cities after the Conquest. However, in some areas the Spaniards built new cities according to their own demands and abandoned the previously existing urban centers. For example, on the Coast such prominent

Indian cities as Pachacamac in the Lurin Valley, Chanchan in the Moche Valley, La Barranca in Pacasmayo Valley, and El Purgatorio in Lambayeque Valley were neglected. In the Highlands, Spanish and Indian centers commonly coincided, except where new towns were built for better exploitation of the mines. During the civil wars which followed the initial Spanish Conquest, many of the Indians abandoned the towns and withdrew to small isolated villages. Later, Spanish Colonial governors tried with varying degrees of success to bring the Indians back to the urban centers for better protection and control. In the 17th century, an active period of church building utilized Indian labor much as in the past.

Today most of the Highland towns have a high percentage of Indians, but the Indians are also found on haciendas and in isolated houses and small villages in many parts of the mountains. The dwellings have changed but little, since their construction has always been done by the individual or his local group. Most houses are now made of adobe, but in some places rough stone is still used. Houses are still small and rectangular, and, as in the past, the interiors are barren of anything except niches, pegs, and perhaps a clay sleeping bench. The great stone-working tradition has disappeared, since there is now no occasion to build large religious pyramids, fortifications, or houses for chiefs.

CRAFTS

The Central Andean pattern places an emphasis on skilled craftsmanship. In most of the archeological periods, high standards of technique and skill are found in such basic crafts as ceramics, weaving, and metallurgy. The fabricated objects are described elsewhere in the Handbook, and in this section an attempt is made to evaluate the technological advancement of the crafts.

Ceramics.—Throughout the total archeological history of this area, the ceramic art has been important. Chavín Period ceramics, so far the earliest discovered, are technologically advanced and by no means primitive. Coil technique, modeling, and casting in molds were known in the Chavín and Early Periods, although not utilized in every subsequent period. There were always two categories of ceramics: utilitarian wares for daily use, and ceremonial wares for grave goods and other religious purposes. The ceremonial vessels were the best designed and are commonest in collections.

No significant technological advancements in ceramics are found in the archeological sequence. However, some generalizations can be made about the changes in art style. Chavín Period ceramics are characterized by monochrome painting with decoration by incision or in relief. In general, the designs are stylized and dominated by the feline motif, although geometric designs used as the only ornamentation are not uncommon. In the Early Periods of Mochica, Nazca, and Tiahuanaco, the painted and modeled designs are pictorial. In Mochica, the decoration is truly realistic; and in both Nazca and Tiahuanaco, the design figures can at least be identified, although they are frequently modified by mythological concepts. Mochica specializes on two-color painting, but Nazca and Tiahuanaco are polychrome. In the Middle Periods, influenced by the spread of Tiahuanaco, the ceramic designs are conventionalized so that in many cases they can be identified only by tracing them back to their original sources. Middle Period painting is polychrome but with a limited range of colors. In the Late Periods, the colors are even more restricted, modeling is conventionalized, and designs are frequently geometric. Finally, the *Inca* Period ceramics, although again polychrome, are dominated by geometric design.

Ceramics illustrate an apparent shift from individual to mass production. At least, the Early Period ceramics seem to emphasize the individual artist. Although for purposes of convenience the vessel shapes can be classified into a few standard categories, variations on these are numerous. By the *Inca* Period, shapes were standardized and variations less frequent.

Metallurgy.—The Spaniards discovered the *Inca* metallurgists utilizing gold, silver, copper, tin, mercury, and arsenic. On the basis of present knowledge, not all these metals were utilized in the pre-*Inca* periods. Instead, a sequence of development seems apparent in spite of the lack of analysis of many of the existing specimens. In the Chavín Periods, gold was the principal metal utilized. On the South Coast, the gold was hammered flat and simple ornaments were cut out, some of them decorated with relief designs. On the North Coast, pressed relief design was common, and there is some evidence of the use of silver, a gold-platinum mixture, and the technique of soldering. In the Early Periods, the goldwork was more complex and new techniques were added. Silver was utilized in the Mochica Period, and pure copper objects have been found in the Mochica, Recuay, Early Tiahuanaco, and Classic Tiahuanaco divisions. There is some evidence of the use of lead in the Mochica Period, although rarely. The pre-Tiahuanaco Gallinazo culture, the first of the Middle Periods, utilized combinations of silver and copper, copper and gold, and a gilding technique. Later in the Middle Periods, a copper-arsenic alloy was made on the North Coast, and a silver-copper combination was in use on the South Coast. Silvering was added to the metallurgical techniques. The casting of copper was common in the Late Periods, and gold was frequently mixed with silver. The first bronze appeared toward the end of the Late Periods, and perhaps not until the *Inca* Period. Since tin is most abundant in Highland Bolivia, presumably the copper-tin alloy originated there, but there is as yet no clear evidence for its pre-*Inca* antiquity. The *Inca* spread the use of bronze to all parts of their Empire.

Metallurgy is one of the few crafts which show any major technological advancement throughout the archeological history. With a knowledge of only gold and silver, metalwork was at first limited to the manufacture of ornaments. Later, pure copper tools were made and their edges hardened by hammering. The efficiency of tools increased with the discovery of alloys of copper-arsenic, copper-silver, and ultimately copper-tin.

Weaving.—Skilled weaving is an ancient characteristic of the Central Andean pattern. Unlike metallurgy, the weaving craft shows no major trend of technological achievement. Instead, time and place differences in woven materials were based on selection or preference for certain techniques and color combinations, rather than on lack of knowledge. This can be briefly illustrated. All periods utilized the same basic materials for spinning, namely, cotton, wool, maguey fiber, and human hair. Likewise, the spindle was essentially the same, although clay whorls were common in the Early Periods and copper whorls later. Some of the finest thread known in Perú was spun in the Early Periods. Wool threads were skillfully dyed, and a wide range of colors was employed throughout. The loom was always the simple girdle-back type, although there is some evidence of a rare, wide-frame loom in the Early Paracas Period. The simple weave swords, heddles, shuttles, weave daggers, and other implements show no major changes. The textiles of the Early Periods on the South Coast illustrate practically all the weaving techniques known in Perú.

Each period and region emphasized certain techniques, although these were not original inventions. In the Early Nazca and Paracas Periods, over-all embroidery and needle knitting were common, and tapestry was used as a secondary design device. In the Tiahuanaco Middle Periods, large, complicated tapestries were typical, knitting was still common, and embroidery rare. Embroidery was again common in the Late Periods, although not of the over-all type. Double cloth, painted cloth, and tie-dye were popular, and the preweave warp dyeing technique called ikat was a specialty of the Late Periods. The *Inca* Periods were characterized by tapestries, reps, and warp patterns.

There was an enormous quantity of weaving in pre-Columbian times. However, almost every piece achieved a high weaving standard, in spite of the complexities of technique and the intricacies of design. Undoubtedly, there were specialized weavers, but many individuals managed to acquire supreme skill. On one Early Mochica Period vessel, a weaving factory is portrayed in which a number of female weavers are at work under the direction of a supervisor. In *Inca* times, all commoners wove their own clothing, but specialized weavers were maintained for the purpose of producing the fine cloth for the *Inca* nobility. At all times, much of the weaving, consuming innumerable days and even years of labor, was for the noneconomic purpose of clothing and wrappings for the dead.

Stone Carving.—Stone carving is not characteristic of all the Central Andean cultures, although it was common in the Chavín, Recuay, and Classic Tiahuanaco Periods. The carving of statues or other forms of sculpturing in the round were poorly developed, but skill was achieved in the application of rather intricate designs to flat surfaces of stone. Much of the stone carving was associated with stone building. Small objects of carved stone are found in many periods. In the Chavín, Tiahuanaco, and *Inca* Periods, ornamental bowls and llamas or other animals were carved from stone. Although some of this work exhibits skill, it would not be classed as one of the outstanding achievements of this area. Carving in other materials, such as wood and bone, is again common but not distinguished.

Miscellaneous.—Baskets, plain or ornamented calabashes, and miscellaneous artifacts of shell, wood, bone, and stone are all common in the archeological sites, but none is of sufficient distinction to serve as a characteristic of the Central Andean pattern. Basketry was never very advanced or varied in technique. The earliest types in the Chavín Periods are totora-reed mats and simple twined containers. Coiled basketry, although old in North Chile, is rare in Perú. The earliest yet reported is in the Middle Period at Cañete.

In the *Inca* Period, many skilled craftsmen were maintained by the State as specialized workers. The Spanish Conquest put an end to such State-supported craft shops and provided no new market for the output, with the result that skilled craftsmen soon disappeared. The manufacture of distinctive, decorated pottery ceased almost immediately. Some of the metallurgists worked for a while as silversmiths but were soon replaced by European or Mestizo artizans. For some time there was a good market for well-made and decorative cloth, both for local use and for export, so skilled weaving continued. In the Colonial Periods, some excellent tapestries of exceedingly intricate design were woven by the Indians. Other crafts were continued only for producing articles for local Indian users.

During the Colonial Periods, the Indians accepted many objects of European manufacture. In the Mature Colonial Period, the system known as the reparto de efectos forced a variety of useless luxury goods on the Indians. During this same period, Indian communities entered the field of commercial enterprise in communal shops for making such things as pottery, cloth, and glass objects. Some community specialization still exists.

Today, the Indian crafts are limited. Utilitarian ceramics are still made, sometimes by individual families, but more frequently by whole

PLATE 1.—**The Peruvian High Andes.** *Top:* Snow-covered pass near Huancavelica. (Courtesy James Sawders.) *Bottom:* A Highland trail. (Courtesy Grace Line.)

PLATE 2.—**Peruvian Coastal and Highland desert.** *Top:* Typical guano bird islands, source of fertilizer in prehistoric and modern economics. *Bottom:* La Hoya Pampa sand dunes. (Courtesy James Sawders.)

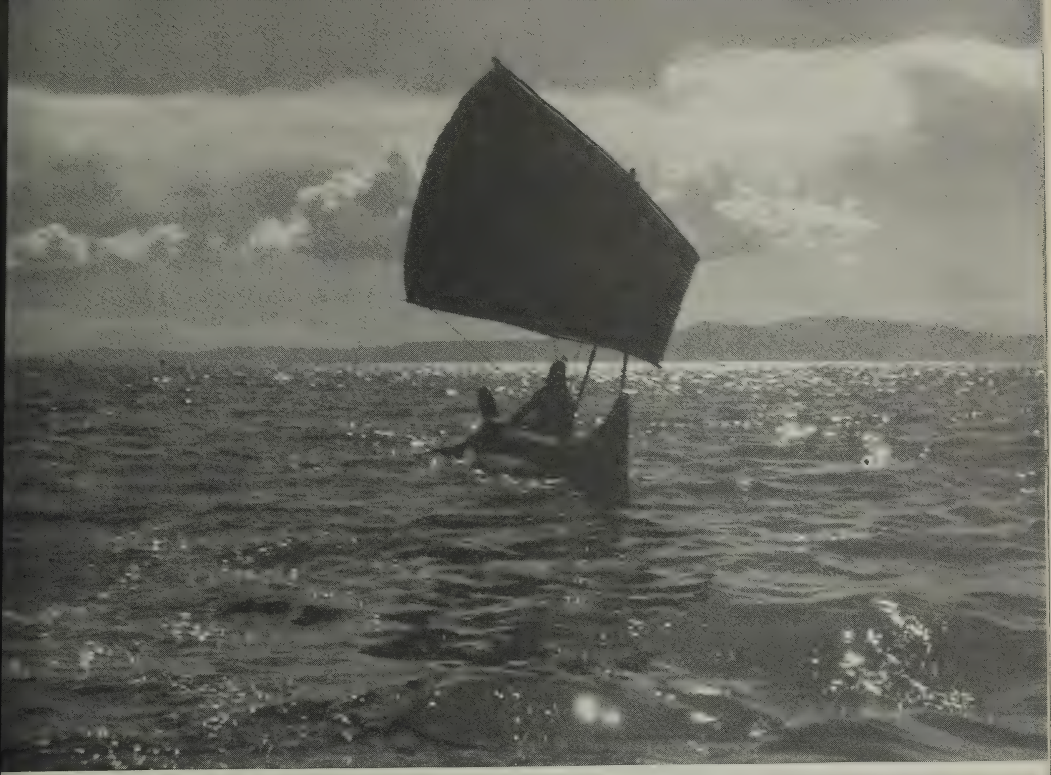


PLATE 3.—**Lake Titicaca, Bolivia.** *Top:* Balsa in full sail. (Courtesy James Sawders.) *Bottom:* Native community along south shore. (Courtesy University Museum, Philadelphia.)

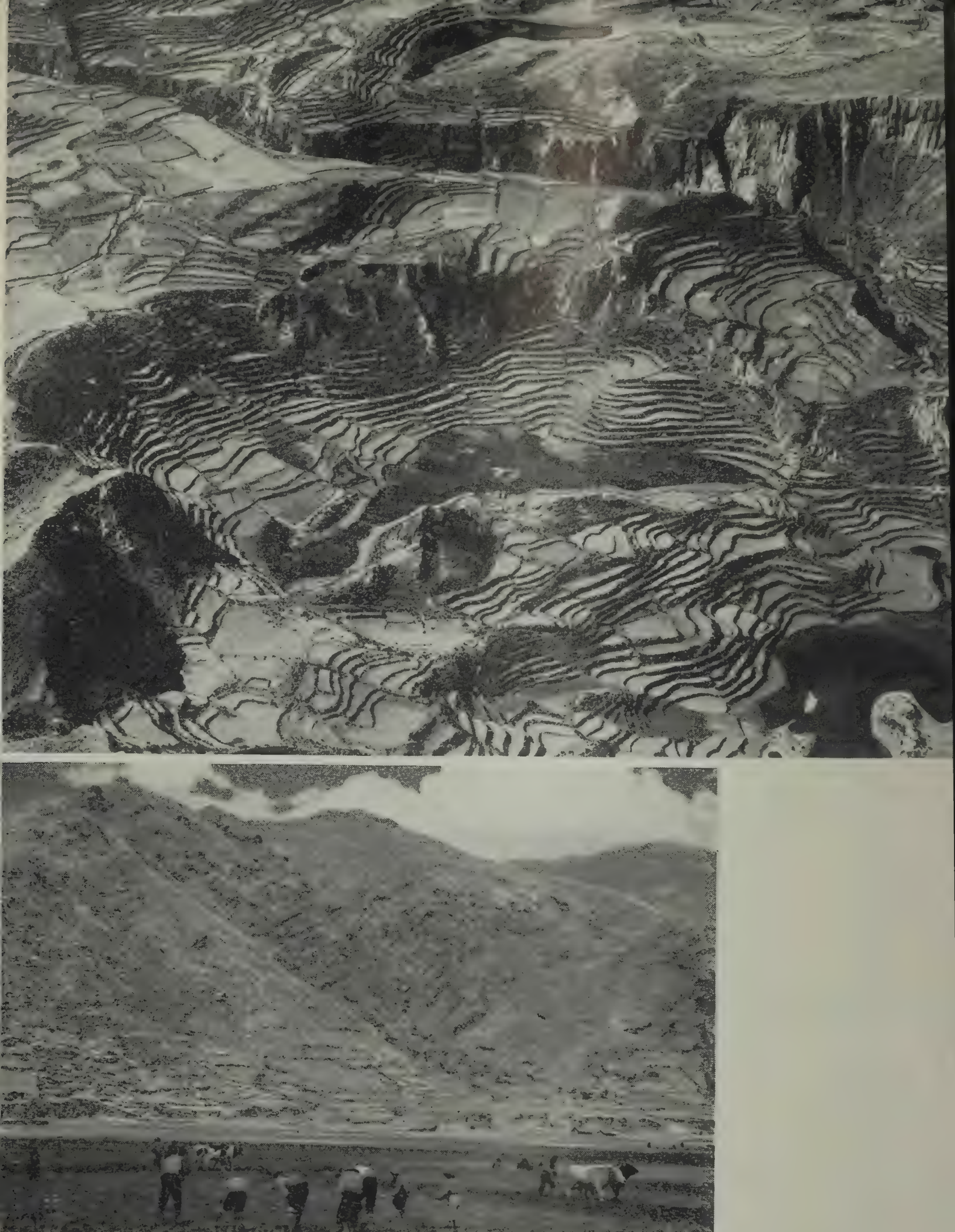


Plate 4.—**Mountain agriculture in Perú.** *Top:* Ancient terraces, some still used, in Colca Valley. (Courtesy James Sawders.) *Bottom:* Valley floor cultivation. (Courtesy Truman Bailey.)

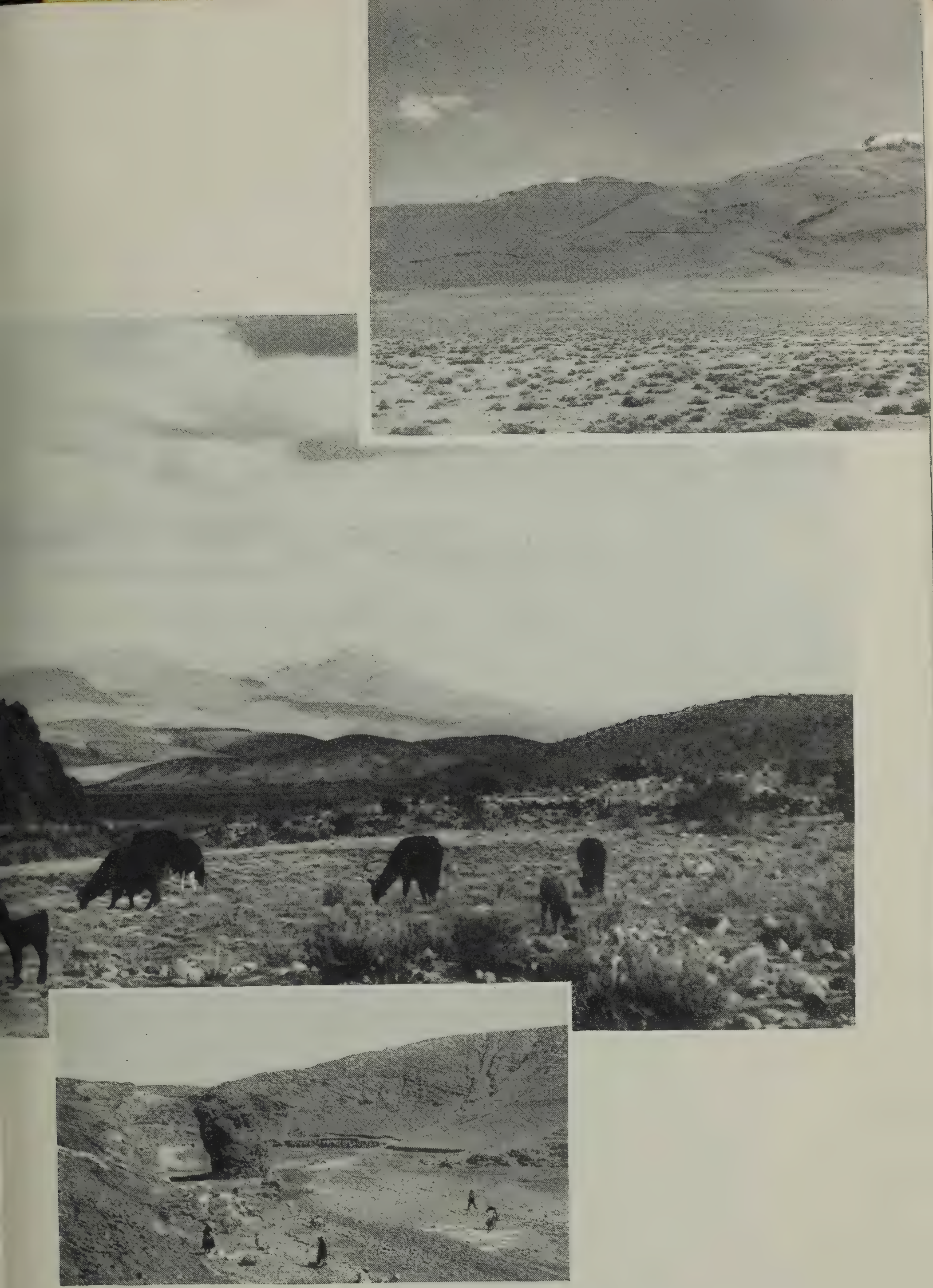


Plate 5.—**Puna of Perú and Bolivia.** *Top:* Typical Peruvian high plateau. (Courtesy Truman Bailey.) *Center:* Alpacas feeding, Bolivia. (Courtesy Grace Line.) *Bottom:* Near Uncia, Bolivia. (Courtesy W. E. Rudolph.)

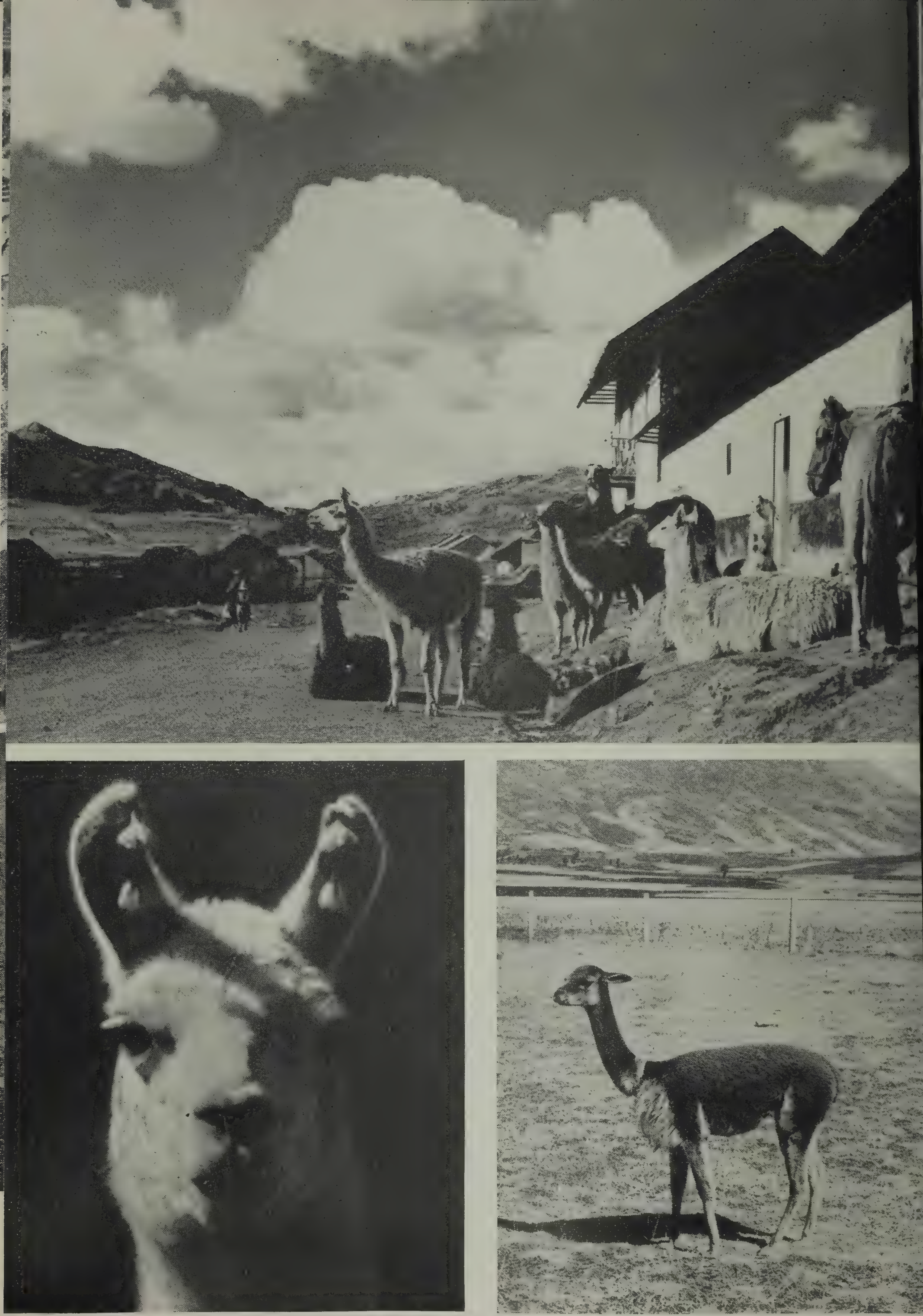
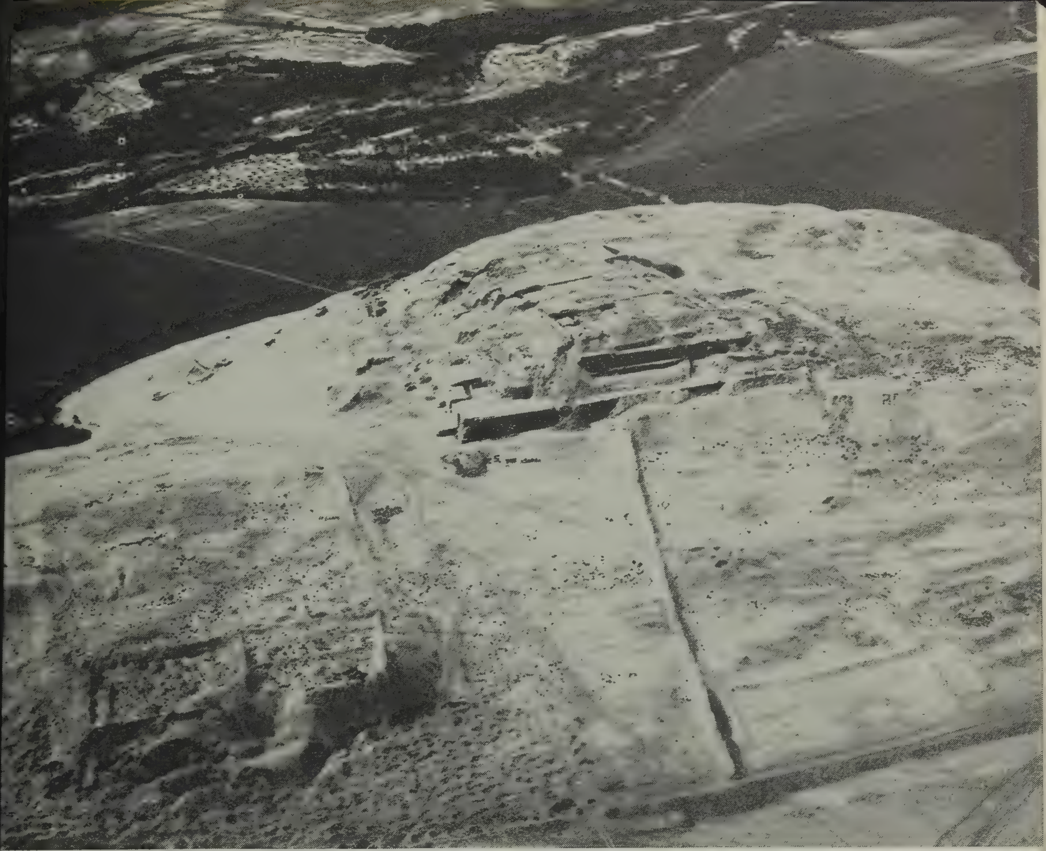


Plate 6.—**Llamas and vicuñas.** *Top:* A Highland scene. (Courtesy American Museum of Natural History.) *Bottom* (*left*)*:* Llama with ear tassels. (Courtesy Grace Line.) *Bottom* (*right*)*:* A young vicuña. (Courtesy American Museum of Natural History.)

Plate 7.—**The upper reaches of the Montaña.** *Top:* Southeast corner of the Castillo at the famous archeological site of Chavín de Huántar, Perú. (Courtesy American Museum of Natural History.) *Bottom:* In the Urubamba drainage, Junín, Perú. (Courtesy Truman Bailey.)

Plate 8.—**The desert Central Coast of Perú.** *Top:* The bay and town of Ancón. *Bottom:* Rocky cliffs and sand dunes near Huarmey. (After Johnson, 1930.)



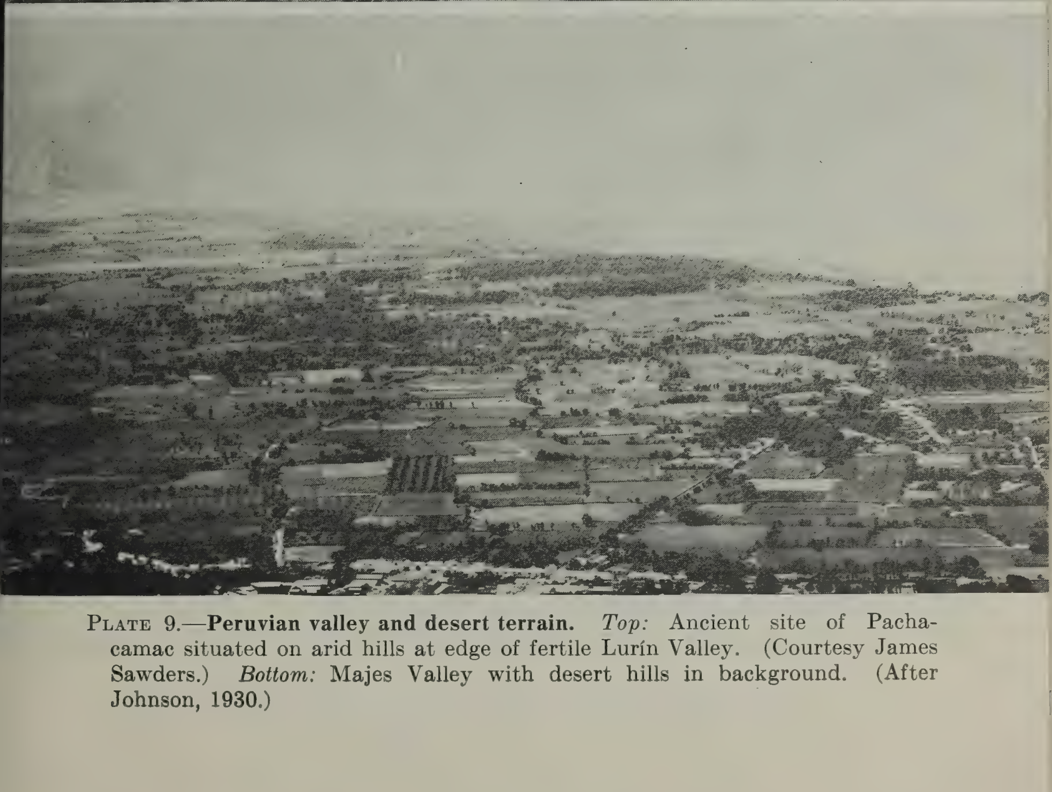


PLATE 9.—**Peruvian valley and desert terrain.** *Top:* Ancient site of Pachacamac situated on arid hills at edge of fertile Lurín Valley. (Courtesy James Sawders.) *Bottom:* Majes Valley with desert hills in background. (After Johnson, 1930.)

PLATE 10.—**Chilean landscapes.** *Top:* View along the Río Itaba, Central Chile. *Bottom:* An Araucaria pine and the Lanin Volcano, Central Chile. (Courtesy Grace Line.)

PLATE 11.—**Chilean landscapes.** *Top:* Osorno Volcano, Lake country. (Courtesy Julian H. Steward.) *Bottom:* The Juncal Valley leading over the Andes. (Courtesy National Geographic Magazine.)

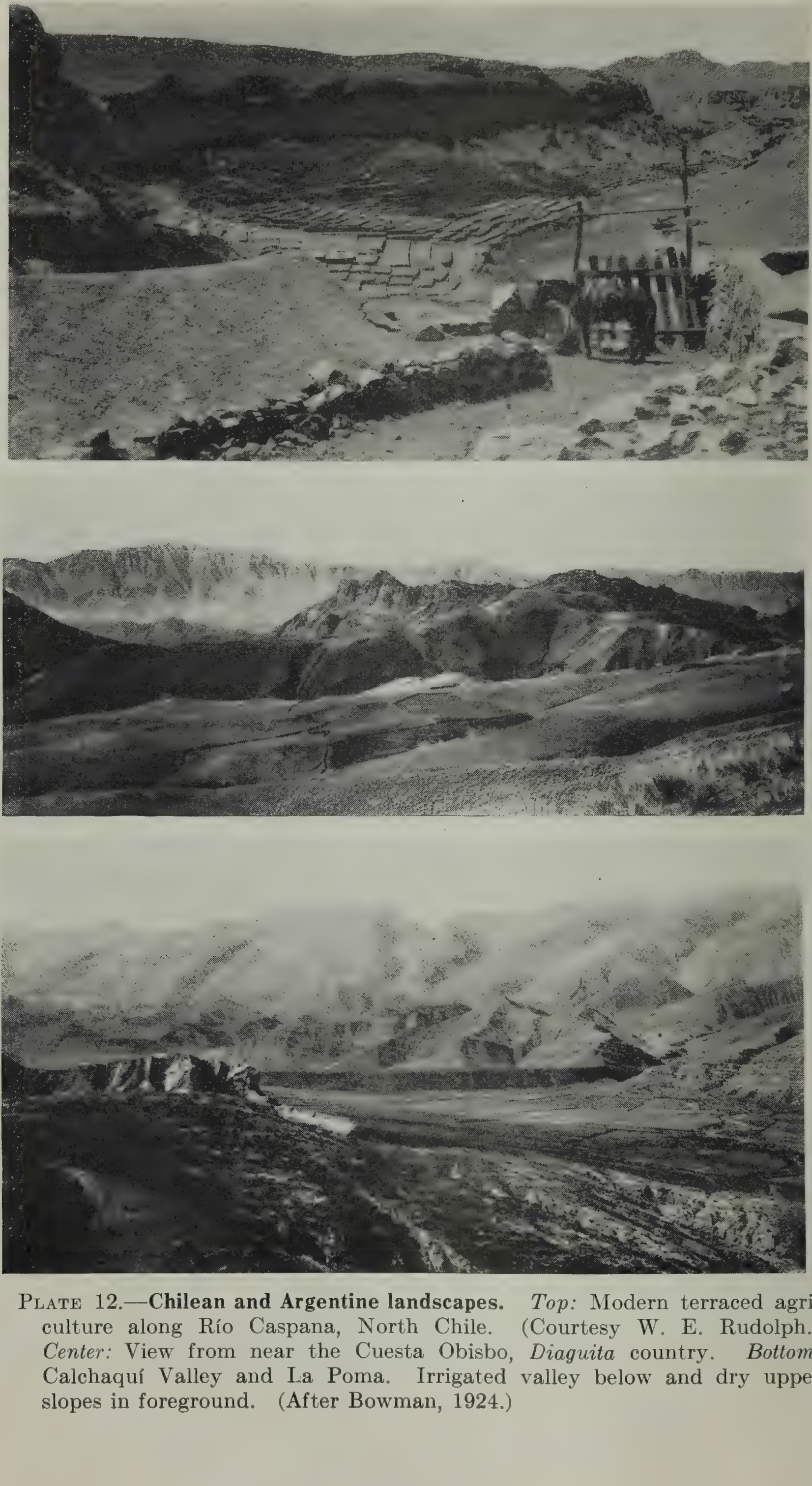


Plate 12.—**Chilean and Argentine landscapes.** *Top:* Modern terraced agriculture along Río Caspana, North Chile. (Courtesy W. E. Rudolph.) *Center:* View from near the Cuesta Obisbo, *Diaguita* country. *Bottom:* Calchaquí Valley and La Poma. Irrigated valley below and dry upper slopes in foreground. (After Bowman, 1924.)

Plate 13.—**The Northwest Argentine country.** *Top:* Quebrada del Toro, Salta. *Bottom:* Nevada de Cachi. (Courtesy Alfred Métraux.)

Plate 14.—**Ecuadorean landscapes.** *Top:* Cañar Valley. *Bottom:* A 13,000-foot-high basin in South Ecuador. (Courtesy Chicago Natural History Museum.)

PLATE 15.—**Ecuadorean and Colombian landscapes.** *Top:* The Highlands near Mount Chimborazo. (Courtesy James Sawders.) *Bottom:* View of part of Bogotá. (Courtesy Wilson Popenoe and the National Geographic Magazine.)

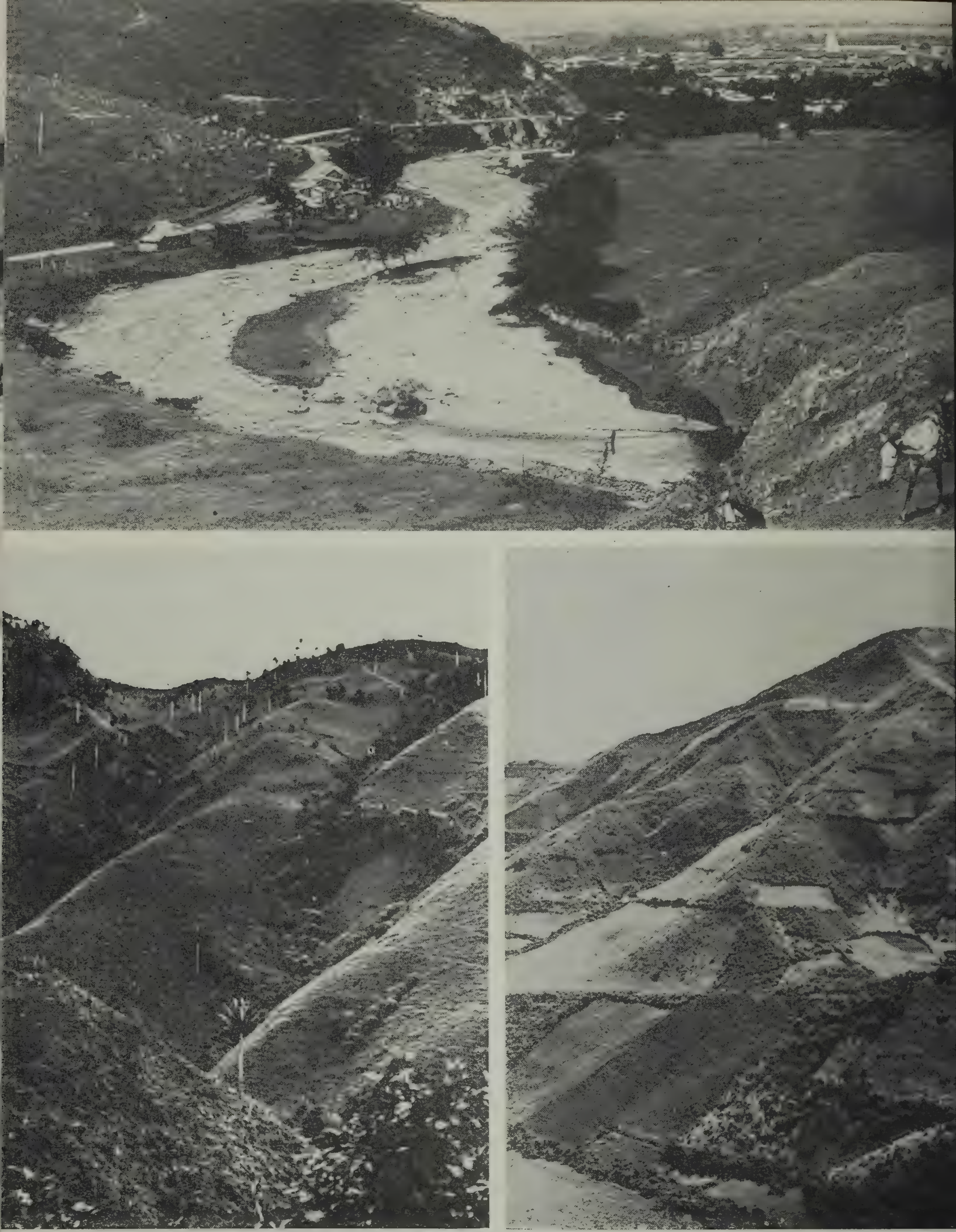


Plate 16. **Colombian and Ecuadorean landscapes.** *Top:* The approach to Cali, Colombia, in the Cauca Valley. (Courtesy Frank M. Chapman and the National Geographic Magazine.) *Bottom (left):* The páramo of the Cordillera Central, Colombia. (After Rich, 1942, fig. 313.) *Bottom (right):* Modern mountain agriculture near Quito, Ecuador. (After Rich, 1942, fig. 298.)

villages which specialize in making ceramics to be distributed via the system of local markets. A few Indians continue to work with metals although the old skills are gone. Most of the objects once manufactured by the Indians have been replaced by superior ones of iron and steel.

Weaving is still extensively done by the Indians. The girdle-back loom and the simple implements for spinning and weaving are still in use. In some places, an upright treadle loom is now employed by the Indians. As a rule, women now weave on girdle-back and simple-belt looms, and men weave on the treadle looms. Most of the weaving done today is for the utilitarian garments used by the local Indians. However, there are individuals and localities which still specialize in finer weaving for the urban market. The products, however, are limited in techniques and rarely achieve a skill or fineness comparable with the pre-Spanish periods.

CLOTHING AND ORNAMENTS

Although details of dress reflected regional and time differences, the standard clothing pattern remained the same throughout the archeological periods of the Central Andes. The basic male costume consisted of a breechclout, a wrap-around skirt, a shirt with or without sleeves, and a shawl. The women wore a wrap-around single-piece dress, secured at the waist by a belt, and a mantle over the shoulders. Both men and women wore sandals and some kind of headgear. A woven bag with a shoulder strap was a standard part of the costume.

Class distinctions in costume are clearly depicted in the Early Mochica Period ceramics. Early Period graves on the South Coast differ in the elaborateness of clothing which accompanies the burials. Costume also distinguished certain occupational groups, such as warriors, priests, and runners. In all periods, special costumes were made for dancers. Mortuary clothing was not only distinctive but also elaborate.

A great variety of ornaments and methods of body decoration were employed in the Early Periods. Tattooing, scarification, and face painting were practiced. Skulls were artificially deformed. Earplugs, nose plugs, and lip plugs were common, and ornamental facial masks were worn. The artifacts discovered in excavating Early sites include many types of beads, necklaces, anklets, rings, collars, plumes, and metal or shell pincers for beard plucking. Although some of the scarification depicted on the modeled pottery vessels may have been ornamental, there is no indication of the leg or arm ligatures so typical of the Amazon.

The Colonial Spanish Period introduced many changes in costume. As part of the process of reducing all Indians to one class level, distinctions in clothing were eradicated. The Indians were forced to adopt new types of clothing in an effort to make them forget their cultural unity. Likewise, many of the Indians voluntarily imitated the clothing of the Spaniards. The result was the creation of a new standard costume for Indians, consisting of pants, jacket, shirt, ponchos (introduced in the post-Spanish time), and hats.

At the present time, the Indians still use this 16th-century costume. The men wear sandals, short pants, shirts, vestlike jackets, and the sleeveless poncho. They still carry a woven or a leather bag. Headgear varies enormously, and the *Aymara* wear both a knit stocking cap and a felt hat. Women wear several skirts, a belt, a blouse, a blanket, and a felt hat. Regional distinctions are still reflected in the details of the costume, and special dance costumes are still used.

MUSIC

Practically all the musical instruments used by the *Inca* are archeologically old. From the Early Periods onward are found drums and tambourines; end flutes of clay, reed, or bone; gongs and clappers; seed rattles; straight and coiled trumpets of clay; shell trumpets; numerous pipes and whistles; and panpipes of reed or clay.

In Colonial Spanish Periods, harps, violins, and guitars were added to the musical equipment. These, together with most of the ancient instruments, are still used by the mountain Indians.

SOCIAL CULTURE

Archeological evidence for aspects of social culture is meager and difficult to interpret. Although the *Inca* customs are comparatively well known from Spanish accounts, it is hard to determine whether these were characteristic of the Central Andean pattern as a whole. The few statements that can be made are based largely on inference from indirect evidence.

Some sketchy information is available on the customs pertaining to the life cycle. Early Mochica Period ceramics depict mothers giving birth to children, assisted by a midwife and sometimes a second person as well. There is a suggestion that a medicine man was employed. *Inca* infants were placed in cradles almost immediately after birth, and cradleboards are depicted in the Middle Period ceramics on the coast. Again in *Inca* times, there was a naming ceremony for a child about 2 or 3 years old. At this ceremony the child's hair was tied in bunches, and each participant in the ceremony cut off a lock and left a gift for the child. Although there is no direct evidence for the antiquity of this custom, it has a wide distribution from the *Chibcha* to the *Calchaquí* and is probably old. The *Inca* emphasized age grades, formal education at least for the upper classes, and puberty ceremonies. No convincing data are available on the antiquity of any of these. Had any great importance been placed on puberty ceremonies, the pictorial

Mochica ceramics might be expected to furnish evidence thereof, but actually the ceramic design and modeling depict but few scenes that have anything to do with children. Information on marriage customs in pre-*Inca* times is likewise lacking.

Burial practices are, of course, well known. In every period, the graves indicate an elaborate concern about the disposal of the dead. Graves are generally well made. The bodies were prepared especially for burial, and commonly they were elaborately wrapped in specially woven cloth. Grave goods were of good quality and quantity, although this depended in part on the importance of the deceased individual. Scenes on Early Period ceramics show funeral dances in which the dancers are represented as skeletons.

The localized endogamous ayllu was a basic unit in *Inca* social organization. The patrilineal extended family and ayllu-like local group are undoubtedly old, but it is difficult to prove this archeologically. However, standard types of headdress and face painting depicted in the Mochica Periods might possibly represent symbols of ayllu affiliation, and the small village sites might suggest organized local groups. The *Inca* town of Machu Picchu had residence units for each ayllu, and in the remains of Late Period cities similar unit divisions are found. The *Inca* moiety is also of considerable antiquity in all probability, in spite of the lack of confirming evidence.

Class distinctions apparently date back to the Early Periods, if one can so infer from ceramic designs. For example, one design shows an elaborately dressed figure carried in a litter by servants. Another is a banquet scene in which a prominent individual is being served. Details on many of the portrait jars can be interpreted as emblems of rank. It is not certain, however, that such class distinctions ever crystallized into a caste system in pre-*Inca* Periods.

The elaborate mathematical political organization of *Inca* society was probably a recent development. In previous periods, chiefs, war chiefs, and others of high rank are represented, but there is little evidence of the extension of a political control over large areas. For example, Mochica ceramics of the Early Periods are found in abundance in the three valleys of Chicama, Moche, and Virú, but it is not certain that these valleys were united under a single ruler. Instead, the numerous battle scenes represent opposing warriors of about the same dress, and suggest considerable conflict within the Mochica culture. However, many scenes on Mochica vessels depict forms of punishment, implying an organized government and a legal system.

The size of building units in all periods is proof that large numbers of people were effectively organized. In general, there seems to have been a gradual development of political systems, culminating in the *Inca* Empire. Previous to this, local groups were led by war chiefs. Then several groups might be united in a loose confederacy. The

Inca added their own caste to the political superstructure, as well as formalizing the government organization.

Many changes in the *Inca* social culture took place during the Colonial Spanish Periods. Although the simple naming ceremony was not disturbed, baptism was added. *Inca* age grades lost their significance, and the *Inca* schools for the upper caste were no longer maintained. Marriage, insofar as possible, was controlled by the Church, which also took part in the burial services, although not to the total elimination of Indian customs. However, under the new economic regime, the Indians were unable to maintain the elaborateness of burial practiced before. Mummy worship was eliminated in the Early Colonial *Quechua* Period.

The immediate effect of the Conquest Period was one of leveling the class distinctions of the *Inca*. Whether the Indians submitted to the Spaniards or joined the separatists, the leveling process was the same. The ayllu continued within the encomienda system, since it was a convenient unit to tax. Indian villages still had native chiefs, but since these chiefs also became the tax collectors, their interests often differed from the rest of the group. The majority of Indians were reduced to hatunrunus, or tribute payers, or yanaconas, the wandering peon class, who escaped tax payment. In effect the complicated *Inca* class structure and political system broke down into a simple pattern of foreman and workers.

In the Early Colonial Period, the corregimiento, or crown control, replaced the encomienda. Indian self-government was replaced by Spanish officials. The ayllu community continued as a convenient source of mita labor for the mines.

Today the hacienda has replaced the corregimiento. The present-day Indians live either in independent communities subject to taxation, or on plantations as peon laborers. The ayllu, as a loosely organized village unit, continues. The simplified Indian customs associated with the life cycle continue, although the Church has formalized the rituals of baptism, marriage, and burial. Indian chiefs of local groups are still recognized, and there are some who claim wider authority, although in reality the power of any chief is definitely limited. Wealth distinctions and differentiated age groups are still recognized, but class distinctions are not formalized nor sharp.

RELIGION

Formalized religious organization and elaborated practices are characteristic of the Central Andean cultures. The *Inca* established their sun-worship religion throughout the Empire, but local religious cults were not entirely eliminated. In pre-*Inca* times, the number and variety of cults must have been enormous, and in all periods religious activities played a prominent role in the lives and energies of the people. The imposing ruins of Chavín and Tiahuanaco, as well as many of the large Coast pyramids, were probably built for religious purposes, and much time, manpower, and organization were required for their construction. Both priests and medicine men were prominent in religious activities. Early Mochica Period designs show medicine men massaging a patient or sucking out disease objects. In the same period, priests are represented, presumably as the formalized leaders of religious cults. In *Inca* times, the priests were well organized and prominent in the ceremonies.

The elaborately prepared burials imply that ancestor worship was an important part of the religion at all times. For example, a considerable proportion of the time and energy of the Early Paracas peoples was devoted to the weaving of cloth for the mummy bundles. During *Inca* ceremonies, the decorated mummies of important individuals were frequently paraded. Several stages of wrapping in a Paracas bundle, alternating decorated and plain fabrics, would suggest that this custom was old.

Anthropomorphized and mythological beings are common in Early Period ceramic design. Everywhere, the feline, serpent, and condor divinities are prominent. Scenes of ceremonies are also depicted. In *Inca* times, ceremonies were associated with the agricultural calendar, and presumably this was also true in the more remote past.

During the Conquest Period, the major changes in Indian society were economic and political rather than religious, in striking contrast to México. The pacified *Quechua* continued their religious practices with little interruption, and missionary activity was directed at the separatist group. During the Early Colonial Period, however, an active campaign to eradicate idolatry was started. The sacred mummies and idols were destroyed, and the remnants of the *Inca* priest group were restrained from practicing. The campaign was successful to the extent that by about 1650 the Church considered that the *Quechua* had accepted Christianity. In the following periods, the Indian religious beliefs and practices that did not conflict with the Church doctrines were tolerated as superstitions. The Indians turned to the Church for prestige outlets.

Today, Indian religion is a fusion of the old beliefs and practices with the Catholic. Ceremonies which once followed the agricultural cycles now merge with the Catholic ceremonial calendar. Small home ceremonies are still performed, and the number of minor magical beliefs and practices is enormous. Sorcerers, diviners, herb specialists, and many other categories of medicine men are still popular.

KNOWLEDGE

True writing and a recorded calendar were unknown in the Andean region. However, mathematical organization was characteristic of the *Inca* Periods, and many records were kept by specialists on quipus, or knotted-string devices. Some writers believe that the quipus may also have been used for recording the days and the years. The antiquity of the quipu is not definitely known, but one Early Mochica Period vessel shows a runner carrying a comblike object which may represent a string quipu. In any case, Larco Hoyle has pointed out that these running messenger figures on Mochica vessels carry bags which contained designed beans. These were seemingly used either as counters or as some kind of ideographic writing. Today the quipu is exceedingly rare.

Trephining and artificial skull deformation was practiced in Early and Late Periods. The use of herb medicines was prominent in *Inca* times and probably far earlier. Trephining and deformation are no longer practiced. Herb medicines are, however, prominent in every market of the Highland region of Perú and Bolivia.

SUMMARY

From this limited review, it is clear that the basic elements of the Central Andean culture pattern were largely established by the early archeological periods. Although it is not possible to assign any accurate dates, it would not seem unreasonable to say that by A. D. 500 the basis of this pattern was formulated. In about one thousand years of development up to the time of the Conquest, there is amazingly little evidence of technological advancement. Certain technological improvements in metallurgy are noted, but the ceramics, weaving, architecture, and carving illustrate a change in emphasis rather than in technology. The most significant changes occur in the fields of social and political organization. There is considerable evidence of a steady increase in population from the Chavín and Early Periods up to the *Inca* Period. With the advancing control of agricultural production and the increase in cultivable land by irrigation, a larger population could be supported even though less actual time was consumed on subsistence activities. In the Early Periods, such leisure time seems to have been devoted to ancestor worship and to the preparation of goods for burial. Later, this control of economy permitted the support of a political superstructure.

The *Inca* crystallized this development of political organization. They established themselves as a ruling class over a wide area in a series of successful military campaigns. The *Inca* system was not directed toward exploiting tribute from the conquered peoples, but rather was an attempt to build up a well-integrated economic organization. It is difficult to evaluate the total *Inca* achievement, but it was certainly successful in terms of organization of a large mass of population.

Other types of trends might be studied, particularly as more detailed evidence becomes available for the various time periods. Kubler (see this volume, pp. 331–410) suggests many possibilities in his discussion of the historical periods, but many are not confirmable in the limited framework of archeological evidence. A careful study of settlement pattern and village type might be feasible. Likewise, one could analyze the dominance of various centers throughout the total history and consider the factors which have caused shifts in these centers. The over-all transportation pattern, land tenure and land use, leadership pattern and prestige, are other suggestions. Population shift likewise is of interest, in terms of colonization (mitimaes), forced withdrawal into the mountains or to the east, spread of archeological styles, and the mobility of vagrant groups following the Conquest.

THE SOUTHERN ANDES

The Southern Andes include those peoples who occupied the mountain region of Northwest Argentina, North Chile, and Central Chile south to the Island of Chiloé. The tribes farther to the south in Chile are included in volume 1 of the Handbook, as they are hunting and gathering peoples. The Central Andean region presents a comparatively uniform pattern of culture throughout its history, but such uniformity is less evident in the Southern Andes. Cultures such as the *Diaguita*, the *Atacameño*, and others, which were directly adjacent to the Central Andes, reflect considerable influence from the Central Andean culture. The *Araucanians*, who were farther away, have a more independent pattern. The period of *Inca* occupation undoubtedly obscured many differences which had previously existed in the Southern Andes, but distinctive local orientation and cultural emphasis is none the less recognizable.

The tribes of Northwest Argentina and North Chile share many cultural similarities. Among such groups as the *Diaguita*, the *Atacameño*, the *Humahuaca* (*Omaguaca*), the *Chicha*, the *Lule*, and the *Churajón* of Arequipa, the same general cultural orientation is seen. All are agriculturists with about the same technical equipment, and all emphasize herding. The stone masonry, house types, village pattern, storage bins, and forts are closely similar throughout. Metal artifacts are almost identical in each group. Wooden artifacts, such as snuff tablets and tubes and many others, are shared by all. The pattern of warfare and the typical weapons are everywhere the same. Coiled basketry, weaving, and leatherwork do not differ greatly. Pottery, although differing in details of shape, is similar in general type of geometric design. The simple political and social organization, judging by limited historical knowledge, varied but little from one group to another.

The inclusion of the *Araucanians* with the tribes of Northwest Argentina and North Chile is little more than a convenience based on their southern geographical location. Culturally, the *Araucanians* are easily distinguished from other tribes of the Southern Andes, particularly in pre-*Inca* times. All tribes of this general area, however, show the effects of numerous contacts with the hunters of the Argentine Pampas, especially in their emphasis on hunting, their extensive use of the bow and arrow, and their loose political organization. In the following description of the terrain and the cultural patterns, the *Araucanians* are kept distinct from the other tribes in the division devoted to the Southern Andes. See this volume, pp. 687–760.

THE DIAGUITA-ATACAMEÑO

THE ENVIRONMENT

The mountain system of the Eastern Cordillera of Bolivia extends into the northwestern part of Argentina. The physical features are much the same, such as the high punas, dry intermont basins, and high peaks which rise above the snow line. Although much of the region is arid, some of the basins have streams which supply sufficient water for agriculture, at least with irrigation, and are surrounded by a puna suitable for grazing. The Andean pattern of intensive agriculture was well established in these sections. Elsewhere in Argentina, the Andean peoples made little headway against the fierce nomadic tribes of the Chaco, the Pampas, and Patagonia. The grass-covered Pampas, today the richest agricultural and grazing district of South America, were not adaptable to cultivation with Indian techniques. In the Highlands, the principal centers of population concentration were, from north to south: Jujuy and Salta, Tucumán, Santiago del Estero, Catamarca, La Rioja, San Juan, Mendoza, and Córdoba.

Archeological finds demonstrate that all these centers were occupied by reasonably advanced cultures, typified by villages of rough stone construction, agriculture, ceramics of high quality, skillful metallurgy, and political unification. These Indian cultures have long since disappeared, but historical references list the location of some of the tribes. The basins of Jujuy and Salta were occupied by the *Atacameño*, who had also spread across the Puna of Atacama into North Chile. To the south, in the basins of Tucumán, Catamarca, San Juan, and La Rioja, were the *Diaguita* (or *Calchaquí*), and the archeological evidence points to a much wider distribution of these tribes. The *Lule* lived around Santiago del Estero, and the *Comechigón* occupied the basins of Córdoba and San Luis. The *Huarpe*, an *Araucanian*-speaking group, migrated from Chile to occupy the Mendoza region or were *Araucanized* through influence from Chile. (See Handbook, vol. 1, p. 169.)

In North Chile, the Atacama Desert extends roughly from the Peruvian border to the Río Copiapó. The Atacama, the most arid desert in all of South America, is crossed only by the Río Loa, and this river supports but one important oasis, around the town of Calama. The Atacama Desert was not only unsuitable for concentrated settlement but also acted as an effective barrier, cutting off Central Chile from much contact with the Andean region to the north. Small groups of fishers, like the *Chango*, were able to exist along the rugged Coast, and the *Atacameño* occupied the oasis of Calama and utilized the neighboring punas for grazing.

In the States of Atacama and Coquimbo, between the Atacama Desert and the Central Valley of Chile, larger streams cut their way to the Pacific. The valley flats that were large enough to support agricultural life were occupied by the *Diaguita* from Northwest Argentina.

Northwest Argentina and North Chile both became part of the *Inca* Empire. However, influences from the Central Andes are reflected in the archeology long before the *Inca* Period. The Tiahuanaco culture influenced and, in some places, temporarily replaced the local cultures.

Western civilization has now largely replaced or absorbed the Indian cultures in all of this region. New uses have been found for the land, such as cattle grazing, stock breeding, the growing of sugarcane and vineyards in Argentina, and the mining of copper and the extraction of nitrates in North Chile.

THE DIAGUITA

The *Diaguita* (or *Calchaquí*) occupied the States of Tucumán, Catamarca, La Rioja, Santiago del Estero, Salta, and San Juan in Northwest Argentina, and the States of Atacama and Coquimbo in Chile. Their language was called *Kakan* and differed from both *Quechua* and *Aymara*. The antiquity of *Diaguita* culture has not been finally determined, although it was definitely pre-*Inca* and contemporaneous in part with Highland Tiahuanaco. Many of the characteristics of the Central Andean cultures are found. The subsistence was basically agricultural. The cultivated plants were similar to those of the Central Andes, and religious ceremonies were again associated with the agricultural cycle. Granaries, built like small houses, were numerous. However, terracing was not common, and it is doubtful that agricultural control was as complete as it was to the north. Hunting was common, and gathering also, particularly of algarrobo beans, from which a mildly intoxicating beer was made. Coca was chewed and tobacco and pariaca were used as snuff. Herding of domesticated llamas and alpacas was of great importance.

The *Diaguita* lived in small irregular villages, marked by individual house units and streets. Some are large enough to be called cities. The houses were built of adobe or rough stones, sometimes set in mud, but no use was made of dressed stone. The walls were supplemented by poles, and the roofing was of poles and thatch. Although some of the houses are of reasonably large size and may have been used as community centers, the large public edifices, so characteristic of the Central Andean pattern, are not found. Forts were built at strategic points, for the *Diaguita* were warlike.

The spear thrower was used, but the bow and arrow was the principal weapon. The stone- and bone-pointed arrows were carried in a quiver. A bronze hand weapon with a point called a knuckle duster and the stone-headed club were other typical weapons. Bolas were also common, perhaps because of greater contact with the hunting tribes of Patagonia and the Pampas.

Diaguita ceramics are of good quality and differ in shapes and designs from Peruvian and Bolivian types. Two basic ceramic styles, the Santa María and the Draconian, have mutually exclusive distribution and suggest a basis for dividing *Diaguita* culture. Little use was made of gold and silver, but copper and bronze objects were numerous even in the pre-*Inca* days. Many of the metal artifacts are of known *Inca* types, such as axes, knives, chisels, hoes, and club heads. However, distinctive metal objects were also made: bronze bells, relief-decorated breastplates, scepters, socketed bronze axes, pestles, and knuckle dusters. Weaving was well developed, and the fabricated articles of clothing follow the standard Highland pattern. Coiled basketry and numerous wooden articles were also made.

The little that is known of *Diaguita* social culture suggests a simplified Central Andean pattern. The naming ceremony for infants was accompanied by cutting off locks of hair. Sororal polygamy and the levirate are reported. Burial was important and the graves contain offerings of many valuable objects. However, cemeteries which contain only child burials in urns are a distinctive characteristic. Some adult urn burials are also found, but direct burial in circular, stone-lined graves is more common. Urn burial may represent an influence from the Amazonian region, since it is not an Andean characteristic. Differences in richness of burial suggest that class distinctions existed, but there is no evidence for a rigid caste system. Permanent large-scale political organization was lacking. However, the chiefs of small units often united in alliances, some of which became quite powerful.

Early Spanish accounts describe special rain ceremonies and others associated with the agricultural seasons in which ceremonial drunkenness was a feature. These ceremonies were led by individuals designated as priests, but the descriptions do not suggest a well-organized priesthood.

The time of the *Diaguita* expansion into Chile is uncertain. In general, the Chilean *Diaguita* differed only in details of culture. The *Inca* mitima system eliminated most of this culture even before the Conquest.

THE ATACAMEÑO

The *Atacameño* occupied the desert of North Chile, the Puna of Atacama, and the Northwest Argentina region of Salta and Jujuy, although they had been displaced by the *Diaguita* in this latter area in pre-*Inca* times. They spoke a distinct language, called *Kunza*. Little is known about *Atacameño* culture except through archeology.

The archeology of the Coastal section of North Chile (Bird, this volume, pp. 587–594) presents evidence of two Preagricultural Periods and one Agricultural Pottery Period, all of which antedated the typical *Atacameño*. The First Preagricultural Period, found in middens at Arica, Pisagua, and Taltal, is characterized by such fishing gear as shell hooks, composite hooks of weights and bone barbs, and harpoons with detachable forepieces. Percussion-flaked tools, stone side scrapers, and mortarlike lava bowls are also found. Burials are extended on and covered by reed mats, and particular attention was paid to the preparation of mummified infants. The lava bowls and percussion-flaked tools carry over into the Second Preagricultural Period, which is characterized by triangular points with concave bases, and some barbed and stemmed points. Fishhooks are of thorn, and the harpoons have bone forepieces. Bolas and spear throwers are found. The burials are flexed, folded in rush mats, and covered with bird- or guanaco-skin robes. In the First Agricultural Period, coiled basketry, plain pottery, weaving, and copper appear simultaneously. Maize, calabash, and cotton appear first, and beans may be later. The burials are flexed, rolled in rush mats, and the graves are marked by posts. Although certain features of this First Agricultural Period suggest the later *Atacameño*, it seems more likely that the ultimate origin of this culture will be found elsewhere than the Coastal region.

Isolated groups of *Atacameño* survived in North Chile and on the Puna of Atacama into Spanish times, but, in spite of the evidence from the Chilean Coast, the culture has a respectable antiquity in the interior. In Northwest Argentina, *Atacameño* is as old, if not older, than *Diaguita*, and in the Calama region definite influence of Tiahuanaco culture is clear.

The *Atacameño* appear to have been great traders, and are sometimes called the middlemen of this region of the Andes. Their culture was eclectic, and at various time periods incorporated elements from the Coast, from the Tiahuanaco, from the *Diaguita*, from the so-called "*Chincha*" culture of southern Perú, and from the *Inca*.

In general, the *Atacameño* culture reflects the Central Andean pattern, although in many places the limitations of the terrain restricted its development. Agriculture was practiced where possible, and llama herding was important. Nowhere is there any great elaboration of culture. Since trade with the more advanced neighbors was common, *Atacameño* needs and crafts were modest. The ceramics are simple and largely utilitarian. How much of their metalwork was manufactured locally is hard to say. Artifacts of wood and bone are the most characteristic. Among the typical wooden objects are toggles for llama harnesses, carved snuffing tubes and tablets, spoons, knives, and daggers which may have been used as agricultural implements, weave swords, spindle shafts and whorls, carved idols, cups or goblets, boxes with covers, combs, tubes, drums, and flat slabs which are sometimes leather-covered and designated today as "prayer books." Bone pins and spatulas and small spoons were decorated with circle designs, and common bone counters were probably used in some game.

The principal weapon was the bow and arrow. The arrows had a wooden foreshaft and an attached point. The bola and the spear thrower have not been found. There is no evidence of large public works or of strong political or social organization. In general, the position of the *Atacameño* is intermediate between the Central Andean pattern and *Diaguita*.

THE ARAUCANIANS

THE ENVIRONMENT

The rift valley of Central Chile is the heart of the contemporary country and includes two environmental zones. Northern Middle Chile extends from the Río Aconcagua, north of Valparaiso, to the Río Bío-Bío. Here the valley is flanked on the east by the high Andes and separated from the Pacific Ocean by a low Coastal range. The climate is temperate and the soil fertile. The region was once occupied by tribes of *Araucanian*-speaking Indians. Later, the *Inca* invaded the area and extended their Empire as far south as the Río Maule, but their political control was not very secure, and they were constantly struggling with the independent *Araucanians* to the south. However, *Inca* influence was great enough to create a marked cultural difference between the *Araucanians* of northern Middle Chile and those of southern Middle Chile. The Spaniards were attracted to the temperate valley and soon replaced the Indian culture.

Southern Middle Chile extends from the Río Bío-Bío to the Island of Chiloé. The valley is of the same formation as in the north, but the climate is decidedly wet, resulting in a heavy rain-forest coverage. This region was long occupied by the wilder tribes of *Araucanian* Indians, who successfully blocked *Inca* invasion and held off the Spaniards for several centuries. Today it is still the homeland of the surviving Indians. Further south, the long Chilean Archipelago was occupied by primitive fishing and gathering groups which show little if any influence of the Andean pattern.

THE CULTURE

The numerous *Araucanian*-speaking peoples, who once occupied most of the Central Chile Valley and who live today south of the Río

Bío-Bío, are united linguistically but apparently never formed a political, physical, or cultural unit. Instead, the *Araucanians* were composed of more or less independent tribes, such as the *Picunche, Mapuche, Huilliche, Pehuenche,* and *Moluche.* A summary of the salient features of the *Araucanian* pattern is difficult because much depends on the time period selected. The *Araucanian* groups have been decidedly eclectic, acquiring much from the *Inca* and perhaps pre-*Inca* peoples, changing radically after contact with the Spaniards, and continually absorbing new elements of Western civilization today.

In Central Chile there are several passes through the Andes which permitted migration and contact with Argentina. The *Araucanian* tribes were once quite similar to the nomadic hunters of Patagonia. They depended largely on hunting, fishing, and gathering for subsistence; used skin clothing; lived in skin tents or shelters; and were organized on a hunting basis. Undoubtedly, some influences from the Central Andes reached them in pre-*Inca* times. However, many of the cultural features by which the *Araucanians* are classified in the Highland pattern were firmly established only after the *Inca* conquest. The *Inca* actually conquered some of the *Araucanian* tribes; others withdrew southward but still received considerable influence. The resulting culture at the time of the Spanish Conquest was a mixture of the Archipelago or Patagonian with the Central Andean. In general, the groups in the north were closer to the Andean pattern, those in the rain forests of southern Central Chile closer to the hunting-fishing pattern.

Most of the Andean domesticated plants were known at the time of the Conquest. Although both men and women participated in agricultural activities, much of the work was left to the women. Planting and harvesting were, however, communal labor. Cultivation was done with weighted digging sticks, stone shovels, and rakes. In the north some irrigation may have been practiced, while in the southern forests the slash-and-burn techniques were employed and there was no use of terraces or fertilizers. Llamas were introduced by the *Inca.* Fishing and the gathering of piñon nuts, numerous wild roots, berries, and greens were always important subsistence activities. Coca was chewed, and tobacco was smoked in T-shaped pipes.

The weapons followed the hunting pattern: bows and arrows, bolas, spears, flat clubs, slings, and bone daggers. The warriors used skin armor, shields, and helmets. The *Araucanians* were always fierce and organized fighters who put up stiff resistance first to the *Inca* and later to the Spaniards. Killing of captives and victory celebrations were standard practices.

In contrast to the Central Andean pattern, water transportation was well developed, including dugout canoes, special boats built of planks, and reed balsas. After the horse was introduced, *Araucanians* became skilled riders.

Pottery was everywhere simple, but proceeding from north to south it becomes cruder and has less ornamentation. At first only bark and llama wool were available for weaving. Only after the introduction of sheep did weaving become truly important. In Colonial and modern times the *Araucanians* have been noted silversmiths, but metallurgy probably does not predate the *Inca* conquest. Many artifacts, such as bowls and spoons, were carved of wood. Basketry was well developed, and skin tanning was a leading craft. The Central Andean pattern of dress replaced the earlier skin clothing, and was itself replaced by European clothing. In general, dress was always simple. No footgear was used, and there were few distinctions in class, occupational, or ceremonial garments. However, face and body painting was common.

The thatched-roof houses were oval or rectangular in ground plan and built of stone, wattle-and-daub, adobe, or planks. Some were of large size with many occupants. Villages were composed of from three to eight houses arranged in a spread-out pattern. Cooperative labor was a feature in house building, but there were none of the large construction units which characterize the Central Andean pattern.

Villages were composed of a number of extended families (kugas), each of which had a head man. The village recognized a chief. Position and inheritance followed patrilineal descent from father to son. Standard marriage was by purchase, but a mock ceremony of bride capture was a part of the ceremony. Important men were polygynous. The political organization was based on the village unit. Each village had its hereditary chief, who was controlled by a council of elders. The villages of a district were also ruled by a higher chief. Finally, the tribe, representing a number of districts, had a head chief, advised by a council of five district chiefs. Although in times of war some chiefs attained considerable power and influence, class distinctions were not sharp, and there was no true caste system. Instead, the total political structure was basically democratic.

The religion was strongly animistic. There were no formal priests, but medicine men were prominent. The ceremonies were of the occasional type rather than based on the agricultural cycle. In general, *Araucanian* crafts and material culture show a close resemblance to the Central Andean pattern, while the social, political, and religious organization reflects the hunting pattern.

Following the Spanish Conquest, many of the *Araucanian* Indians adopted the horse and became nomadic hunters and raiders. They spread to Argentina, where they caused considerable disturbance for a long period of time. Although pushed out of much of their territory by the Spaniards, they continued to resist up to the year 1887, when they were granted special reservation privileges by the Chilean Government.

THE NORTHERN ANDES

The Northern Andes include the Highlands and most of the west Coast of Ecuador, and the total Highland section of Colombia. The mountains of Colombia lay beyond the maximum expansion of the *Inca* Empire, and consequently the cultures were not subjected to the leveling process which obscured the picture of so many native cultures outside of the Central Andean area. Instead, many tribes of Colombia, notably the *Chibcha*, developed distinctive cultures, although still definitely part of the Andean continuum.

Ecuador lies between the distinctive centers of Colombia and Perú. The period of intense *Inca* occupation obscured the previous Ecuadorian patterns, but the archeological remains indicate that Highland Ecuador was as closely linked to Colombia as to Perú. For example, stone building is not a feature of Highland Ecuadorian culture, nor is llama herding. In fact, more significant links with Perú are found on the Ecuadorian Coast, where stone building and stone sculpture are outstanding.

Throughout their total history the high civilizations of the Andes must have exercised a profound influence on much of the cultural activity in the South American continent. Many authors have stressed the possible contributions to Andean cultural development by the tribes of the Amazon. In fact, some authors attribute great importance to the *Arawak* in this respect. The botanical evidence that the marginal Amazon was a center of plant domestication gives weight to these considerations. The influence in the reverse is, however, often neglected since the *Inca* political Empire did not penetrate deeply into the Tropical Forest nor the temperate plains regions. However, direct trade with Amazonian neighbors must have been an old established practice in the Central Andean region, and in the more marginal areas these contacts must have been even closer. (Further discussion of cultural relations between the Tropical Forest peoples and the Highlands will be found in the section dealing with the Montaña tribes, in volume 3 of the Handbook.)

In the Northern Andes, the cultural links with the Tropical Forest cultures are particularly marked. The northern Ecuadorian Highlands and all of the mountains of Colombia are virtually surrounded by Tropical Forest regions, on the west, north, and east. Agricultural methods and house types in the Highlands are similar to those in the lowlands. In spite of the cultural exchange, however, one cannot speak of a typical Amazonian culture in the Highlands or the reverse.

The differences between Ecuador and Colombia are of such magnitude that each is treated separately in the following analysis.

ECUADOR

THE ENVIRONMENT

The country of Ecuador can be described in terms of three major topographical zones. The west Coast plain, broken by low hills, varies from tropical rain forests in the north to arid conditions in the south. The Highlands are composed of a series of intermont basins flanked on both sides by high mountain ranges. The eastern plains are in the upper Amazon drainage, and the Indian cultures of this section belong properly with the lowlands (the Montaña, Handbook, vol. 3), rather than the Highland division. Ecuador lies strategically between the centers of high civilization in the Central Andes of Perú and the Northern Andes of Colombia. Through both archeological and historical evidence, the Indian cultures of Ecuador show the effect of this intermediate position. Ultimately, large parts of Ecuador were actually incorporated in the *Inca* Empire.

The two parallel ranges of the Ecuadorian Andes are separated by a rift valley in which lie 10 intermont basins from 7,000 to 10,000 feet (2,100 to 3,000 m.) in altitude, arranged roughly in a row from north to south. In the mountains are some 30 active volcanos which have filled the valley and the basins with a volcanic ash which forms a porous soil and one subject to severe erosion. Although the forest limit is around 10,000 feet (about 3,000 m.) in Ecuador, the intermont basins were originally covered largely by brush. However, the original vegetation has been greatly changed by centuries of occupation, burning brush for charcoal, and clearing fields for planting.

James (1942, pp. 127–29) gives a brief description of the principal intermont basins. The northernmost, Tulcán, is on the Colombia-Ecuador border, and, although well drained, its altitude of 9,500 feet (about 2,900 m.) is too high for many crops. The basin of Ibarra has an altitude of 7,000 to 8,000 feet (about 2,100 to 2,400 m.), but it is badly eroded. Some of the deep valley bottoms are but 2,500 feet (about 760 m.) in altitude and are utilized today for sugarcane and cotton. The Quito Basin, in which the capital of Ecuador is situated, is one of the richest in agriculture, but its neighbor, Latacunga, is again dry and badly eroded. Riobamba is filled with a porous ash which makes cultivation difficult. Alausí Basin, in reality a river flat, lies largely below 8,000 feet (about 2,400 m.), and is intensively cultivated. The large basin of Cuenca is, like Quito, one of the most productive and most extensively occupied today. The three remaining basins in the south are Oña, Loja, and Zaruma. All of these are widened flats of river valleys with rich soils.

The archeological remains show the importance of many of these basins as centers of cultural development. At the time of the *Inca* Empire, many tribal names were recognized in the Highlands of

Ecuador although all may not have been distinct cultural entities. Most authors agree on the five major groups in the Highlands before the *Inca* conquest: the *Pasto,* largely in the Colombian State of Nariño and the basin of Tulcán; the *Cara,* centered in the basin of Ibarra and once credited with organizing most of Ecuador into a single Empire; the *Panzaleo,* or *Quito,* around the basin of Quito; the *Puruhá,* around Riobamba; the *Cañari,* in the Cuenca Basin; and the *Palta,* in Loja. The *Palta* seem linguistically related to the *Jívaro* and may have originally been part of that upper Amazonian group. The Highland basins are still densely populated, and the Indian percentage of the population is high.

The Coastal plain of Ecuador varies greatly in environment. In the north, like the Pacific Coast of Colombia, it is mostly covered with a tropical jungle, supported by a heavy double rainy season. As previously mentioned, the Indian groups which occupied this region are assigned to the Amazonian rather than to the Andean pattern, although their proximity to the Highlands was not without influence. South of the tropics in the Departments of Esmeraldas, Manabí, and Guayas, the Coastal plain is broken by low hills, and there is but a single rainy season from December to June. The vegetation is described as park land and scrub forest, and today this region is ideal for the raising of cacao. Farther south, are the desert conditions so typical of the Coast of Perú. Sparse settlement is possible on the few available oases.

Among the tribes said to have occupied the Coastal region from south to north are the *Puná, Huancavilca, Manta,* and *Esmeralda.* Scattered remnants of these Indian groups still survive, although for the most part they have been replaced by a Mestizo population.

THE HIGHLAND AND COASTAL CULTURES

A picture of the cultural patterns of Ecuador in pre-*Inca* times is difficult to reconstruct; first, because the period of *Inca* occupation, although relatively brief, was intense; and second, because the Spanish chroniclers made little effort to distinguish between the imposed *Inca* customs already familiar to them and local variants that might have been earlier. Thus knowledge of pre-*Inca* Ecuador depends largely on archeological evidence and the occasional statements which can be gleaned from the chroniclers.

Large parts of the Highlands have not as yet been systematically explored by the archeologists, but on the basis of present knowledge it is clear that each major region of population concentration has a long and distinct cultural history. Collier (see pp. 769–780) sums up the evidence in terms of five major Highland sections, namely Carchi, Imbabura, Tungurahua-Chimborazo, Azuay-Cañar, and Loja. At the present time, each of these has from three to seven chronological periods established with certain authenticity. Although the earliest manifestations may not extend back before the Christian Era, as some have suggested, there is little doubt that future archeological work will establish a respectable antiquity in comparative Andean terms. Each of the archeological divisions presents distinct features, such as the deep-shaft, multiple-burial chambers of Carchi, the burial and dwelling mounds of Imbabura, the rough stone houses of Tungurahua-Chimborazo, and the excellent goldwork of Azuay-Cañar. Although there were definite overlapping styles and influences from one region to another, such as the widespread Tuncahuán style of ceramics, there is no evidence of great cultural or political uniformity over a wide area. Still, every zone shows a respectable cultural inventory for each of its recognized periods. It is interesting to note the absence of strong Central Andean influence in the pre-*Inca* archeological periods. Instead, the affiliations with Colombia seem better established.

In general, however, the reconstruction of Highland Ecuador culture from the chroniclers and the archeological remains in the immediate pre-*Inca* period presents a pattern of the general Central Andean type. Subsistence was based essentially on the cultivation of maize, beans, squash, quinoa, and potatoes. From the deeper valleys many tropical fruits were obtained as well as the condiment ají. Women seem to have played an important part in the agricultural activities, and markets for exchange of food were prominent. The dog and the guinea pig were the principal domesticated animals, although there is archeological evidence that the llama was known before the *Inca* conquest. Hunting was of greater importance than in the south, perhaps because of the greater abundance of deer, rabbits, and game birds. The principal weapons were still the spear, spear thrower, slings, and wooden clubs.

Houses were arranged in fairly large villages. Most of them were of perishable materials until the *Inca* introduced stone masonry on a large scale. Pottery and weaving were well advanced and work in gold, copper, and gilded copper equaled the technical skill of the Central Andes. The clothing follows in general the *Inca* pattern, although the *Cara* men wore large cotton wrap-around blankets as a variant.

The composition of the villages may have followed an ayllu pattern, although evidence is meager, and the cultivated land seems to have been individually owned and inherited. The local groups had chiefs, and in some cases this office was inherited in the male line. Chiefs of various units kept in touch with each other and frequently joined in loose confederacies. In fact, there is every indication that the Highland tribes were well on their way to state organization and sharper class distinctions. However, the historical account of the widespread *Cara* Empire is no longer acceptable.

The common hair-cutting, naming ceremony for children was followed. Although the majority of the people were monogamous, the chiefs are said to have had several wives. Considerable attention was paid to death ritual and burial in mounds, deep-shaft tombs, coffins, and rarely urns. The religion emphasized the natural features of the mountain region. Idols of wood and stone are mentioned. Medicine men were prominent, but whether a priest group existed is not clear.

On the Ecuadorian Coast, two archeological zones are outstanding. In the north, the Esmeraldas district is noted for its large circular mounds for burials and perhaps as bases of temples. Clay figurines of exceptional modeling are found, as well as a great variety of small metal objects made in gold, platinum, and gilded copper. Farther south, the Manabí region is characterized by an extensive use of stone. House enclosures are numerous, but more outstanding are the stone bas-reliefs, and the unique U-shaped stone seats which rest on carved animal and human figures.

The pre-*Inca* cultures of the Coast are little known from the historical sources. Fishing and hunting seem to have been of prominence in the subsistence, and some even suggest that the agriculture was left entirely to the women. Clothing was scanty in comparison to the Highlands. Houses were made of perishable materials. The Coastal groups were united because of the coastwise shipping, and some developed ocean travel and trade to a high degree.

During the second half of the 15th century, the *Inca* spread their control over both Coast and Highland Ecuador. The campaign was started by the *Inca* Emperor Tupac Yupanqui, but was not formally completed until the time of Huayna Capac, about A. D. 1495. The *Inca* Period ends with the Spanish Conquest shortly after A. D. 1534. However, in spite of this relatively short period of occupation, *Inca* influence was intense. *Inca* pottery has been found in great quantity, and a vast amount of stone building is attributed to the Period, far more than is found in Argentina or North Chile. New food plants, such as the sweet potato, oca, sweet manioc, peanuts, and coca, are thought to have been introduced by the *Inca*. Llamas, although they may have existed before, certainly increased in numbers and importance. (It is interesting to note, however, that the llamas and alpacas have not adapted well to the Ecuadorian páramos. Although they still exist today, the numbers are greatly reduced, and it is obvious that Ecuador is a poor country for breeding these animals.) The *Inca* made Quito a second capital of their Empire. Through their system of mitimaes, rebellious groups were moved out of the area and assimilated peoples moved in. *Quechua*, the *Inca* language, virtually replaced previously existing tongues spoken in the Highlands of Ecuador.

The Spanish Conquest and subsequent historical periods repeat essentially the same sequence as noted for the Central Andes. The Coastal Indians were soon replaced or absorbed, especially as new commercial products and ocean shipping ports became important. The Indians of the Highlands continued to serve as labor supply on haciendas and in the mines. The effect of the historical periods has been to eliminate even more the cultural differences between the Ecuadorian Indians and those of the Central Andes.

COLOMBIA

THE ENVIRONMENT AND TRIBES

Of the present country of Colombia, only the western one-third is in the region of mountains and valleys. Here, according to James (1942, p. 79), "there are more different kinds of land than are to be found in any comparable area in South America." The eastern two-thirds lies in the Llanos of the Orinoco or in the Tropical Forests of the Amazon.

Not all the western third of Colombia is mountainous, and even in the Highland sections only a relatively small portion of the terrain offers what might be considered optimum conditions for developing the Andean culture pattern. A review of the topography of western Colombia will clarify this statement. There are four major mountain ranges which run north to south in Colombia. Along the Pacific Coast is a low range called the Serranía de Baudó. In spite of peaks that rise to 6,000 feet (1,800 m.) in altitude, most of this mountain range, like the surrounding coastal plains, is covered by heavy tropical rain forest. In fact the Pacific Coast of Colombia is one of the wettest areas of South America, so that the flora and the fauna and the general environment are remarkably similar to the tropical Amazon forest. The scattered tribes which occupy this region, such as the *Chocó* in the north and the *Colorado*, *Cayapa*, and *Barbacoa* in the south, pertain to an Amazonian type of culture rather than an Andean.

The next two mountain ranges, the Cordillera Occidental and the Cordillera Central, reach altitudes of over 10,000 feet (3,000 m.) and over 18,000 feet (5,400 m.) respectively, and are separated by the rift valley of the Cauca. Large intermont basins are lacking but the mountain slopes are covered with forests, which, if the grade is not too steep, can be cleared away by cutting and burning for small-scale cultivation. However, no part of this region is suitable for large-scale cultivation in terms of Indian economy.

In the Departments of Antioquia and Caldas, the Cauca River valley is flanked by narrow strips of flat land. Farther south, in the Departments of Valle and Cauca, the river has cut out a large flat valley about 150 miles (240 km.) long and from 15 to 20 miles (24 to 32 km.) wide. The valley has an average altitude of about 3,000 feet (900 m.) above sea level, and is today an important region for sugarcane and for grazing. In pre-Spanish times, the same valley was apparently of little use. The flats were either swampy or covered with a heavy grass resistant to indigenous agricultural techniques.

Most of the Indian groups which inhabited the Cauca Valley region disappeared or were absorbed in the population long ago. The early Spanish accounts reported small populations with little semblance of organized political structure. Some of the tribes mentioned are the *Coconuco* around Popayán, the *Lile* around the present town of Cali, the *Quimbaya* around Cartago, the *Nori* around Antioquia, and the *Sinú* along the Sinú River. Other tribes of less certain location were the *Gorrón*, *Chanco*, *Ancerma*, *Pozo*, *Arma*, *Buritica*, *Dabeibe*, *Paucora*, *Caramenta*, *Carrapa*, and *Umbra*. The *Chibchan* linguistic family was dominant. The general impression is that of numerous small tribes occupying limited areas of the mountain region on both sides of the Cauca Valley with little or no over-all political unification.

The archeology of this region, although inadequately studied, presents an equally simple picture. Three major ceramic styles are distinguishable: the little-known Sinú River style, the Quimbaya (archeological, not tribal) style found throughout most of the Departments of Antioquia and Caldas, and the Upper Cauca style, which includes a number of minor subdivisions. No remains of concentrated population centers have been discovered, which would confirm the pattern of isolated house sites and cultivated plots scattered about the mountain slopes. However, in spite of the lack of evidence of large-scale social organization or village pattern, the archeology reveals well-developed crafts. For example, the Quimbaya ceramics are varied and of good quality and the goldwork is outstanding. Although preservation of perishable objects is poor, numerous spindle whorls of clay show that weaving was common. Graves of the shaft-and-chamber type are well made and contain large quantities of mortuary furniture.

The fourth major mountain range, the Cordillera Oriental, is separated from the Cordillera Central by the Magdalena River Valley. The Cordillera runs north and then turns abruptly to the east, skirting the southern end of Lake Maracaibo and entering Venezuela. Extensive intermont basins are located in the Departments of Cundinamarca and Boyacá, centered roughly around the towns of Bogotá and Tunja. These Highland basins lie in the zone of tierra fria, between 6,500 and 10,000 feet (about 2,000 to 3,000 m.), high enough to temper the climate. Level stretches are extensive, the soil is fertile, and precipitation is ample. The natural vegetation coverage is of the park-land and grassland type, which was easily cleared by the Indians. The páramos above these basins were of little use to the Indians although they are now utilized for cattle grazing. Below the basins, the mountain slopes are badly cut by erosion with little flat land.

These high basins of the Cordillera Oriental possessed the most favorable environmental conditions in Colombia for the development of the Andean culture pattern and were, in fact, the homelands of the *Chibcha* civilization, frequently described as the third highest in the Americas. This region was not only the center of the greatest population density in Colombia's past but still maintains that distinction today. Although the *Chibcha* culture has virtually died out, Spanish descriptions, confirmed in part by archeological work, testify to the extent of the population, the development of the crafts, the village pattern, and the advancements in large-scale political organization.

In the northern and eastern extension of the Cordillera Oriental, large intermont basins are not found, and the pattern of scattered farms and habitations was similar to that of the Cauca Valley. Some of the tribes mentioned for this area are the *Agata*, the *Lache*, the *Chitarero*, *Guané*, *Timote*, and *Cuica*. Again, little is known about these now extinct tribes, although all were definitely influenced by the dominant *Chibcha*. (See Handbook, vol. 4.)

The middle Magdalena River Valley and the swampy low flats which border the Caribbean Sea are covered with heavy tropical forests. The scattered tribes which occupy this area belong culturally with the Amazonian pattern, in spite of the fact that some of those in the Magdalena Valley, such as the *Panche* and the *Muzo*, were neighbors and enemies of the *Chibcha* and undoubtedly received cultural influences from them. The tribes found in the tropical lowlands, along the Río César and surrounding Lake Maracaibo, likewise belong in the Amazonian division, and will be described in the Handbook, volume 3.

The isolated mountains of the Sierra Nevada de Santa Marta, separated from the Cordillera Oriental by the Río César, are covered with heavy rain forests. In terms of this analysis, this region would not seem particularly favorable for the development of the Andean pattern, although cultivation was possible on many of the lower mountain slopes. However, archeologically speaking, Santa Marta is the only region in Colombia outside of the *Chibcha* area with good evidence of fairly large villages, and is exceptional in its extensive use of stone as a building material. Village ruins of the now extinct *Tairona* culture are characterized by large, stone-lined, circular house platforms, stone-faced terraces, streets, reservoirs, bridges, stairways, and dressed-stone tombs. Ceramics, metallurgy, and the carving of bone, shell, and stone objects were technically advanced. The Indian groups in this area today, such as the *Cágaba*, *Ica*, and *Chimila*, speak the *Arhuaco* language, in turn related to the *Chibcha*. Although possibly descendants of the *Tairona*, the contemporary Indian cultures do not assist much in explaining the more elaborate development in the past. Northeast of Santa Marta on the dry Goajiro Peninsula, the Indians of the same name who today maintain a culture highly influenced by Western contact, belong clearly in Tropical Forest pattern.

Around the headwaters of the Magdalena River and in the Tierradentro region, between the upper Magdalena and the Cauca Rivers, the rolling, forest-covered mountains are continuous. Here again, as in so many parts of the Colombian Highlands, small agricultural plots and small isolated clusters of houses were located on the river flats and on the mountain slopes. The surviving *Chibchan*-speaking tribes, the *Paniquita*, *Páez*, *Pantágora*, *Pijao*, and *Andaki*, still maintain this pattern. Two distinctive archeological periods are found in this region. The first, designated as San Agustín, is centered around the headwaters of the Magdalena River and is noted for its carved stone statues representing humans, anthropomorphic beings, animals, and birds. Small dwelling sites and mounds containing stone-lined temples are characteristic. This period is presumably quite old in time, but in spite of the size of some of the statues and the labor which must have been necessary to build some of the temple mounds, there is no evidence of great population density or elaborate social organization. The other major archeological period is named after the region of Tierradentro. It is characterized by elaborate, subterranean chambers with a large central room surrounded by niches in which the walls are carved in relief and painted with geometric designs in black, white, red, and sometimes yellow. However, there is no evidence of large population or complex organization.

The final region in the Colombian Highlands is the southern part in the Department of Nariño. Here the principal intermont basin is in reality one of a series which extends through Ecuador and, from a practical point of view, pertains geographically (as well as culturally) to the Ecuadorian Highlands rather than to Colombia. The *Pasto* and *Quillacinga* tribes were in this region.

Eight major geographical areas with distinct styles of materials are recognized by archeologists in Colombia, namely, *Tairona*, *Chibcha*, San Agustín, Tierradentro, Nariño, Upper Cauca, Quimbaya, and Sinú. All these fall within the Highland regions, since the archeological remains of the lowlands of Colombia are virtually unknown. These eight major areas are represented by well-made ceramics, evidence of a competent weaving, excellent metallurgy, and some elaboration of burial methods. However, except for the *Chibcha* and, more dubiously, the *Tairona*, there is little evidence of large concentrated populations, advanced political organization, or many of the other characteristics which typify the Andean pattern in Perú and Bolivia. For a brief time, the *Inca* Empire skirted the southern border of Colombia, but its direct influence was probably negligible. However, archeological evidence shows that Colombia was not completely outside of the sphere of Andean developments to the south. Quimbaya pottery clearly reflects certain Peruvian influences of the pre-*Inca* periods. The stone statues of San Agustín were in all probability related to or influenced by Peruvian stone carving. Furthermore, Colombia was affected by some influence from the higher civilizations of Central America. Historically, Colombian cultures reflect the marginal position to the Peruvian Andes and to Central America.

In many ways, the growth of large, concentrated populations, urban patterns, and widespread political organization was handicapped by environmental limitations. For example, the domesticated llamas and alpacas, so important in southern Perú and Bolivia, were not herded in Colombia. In large part, this is due to the fact that the high páramos, unlike the punas, are not suitable for these animals. Even the wild forms, the vicuña and the guanaco, are not found in Colombia. Likewise, copper is rare and tin deposits are not found in Colombia, so that metalwork was limited to gold, some silver, and such alloys as could be made with the available copper. Limitations of terrain for cultivation have been mentioned previously.

The habitation pattern in Colombia has changed markedly in the 400 years following the Spanish Conquest. Today, James (1942, p. 94) lists 14 centers of population concentration in Colombia. The only correspondence with the pre-Columbian Indian pattern is in the high basin region in the Cordillera Oriental in the Departments of Cundinamarca and Boyacá, the old *Chibcha* territory. Otherwise, the growth of new centers has been made possible by factors outside of the range of Indian economy and technology. Wheat and barley are cereals which grow at higher altitudes than maize, and thus expanded the cultivable terrain. The ox-drawn plow could cope with grasslands resistant to Indian digging-stick methods. Domesticated cattle, sheep, and horses flourished on the high páramos worthless to Indian economy. The commercial market for cinchona and later for cacao opened up new terrain. Many of the mountain slopes, cultivated in desultory fashion or not all by the Indians, have become the prize coffee lands. Discovery of oil created new centers in the Cordillera Oriental. Shipping ports developed on both the Caribbean and the Pacific. Irrigation methods and planting of sugarcane now make the Upper Cauca Valley a rich region. Platinum and gold mines have formed new communities. Bananas have turned the tropical lowlands into a profitable region.

Most of the new centers have not been dependent on the limited Indian population. The Spaniards soon discovered that, outside of the *Chibcha* region, the Indians were either too few in number or too resistant to be an important source of labor. Consequently, Negroes were imported at an early date and have since been brought in greater numbers to work in the tropical regions. As a result, the Indian element in the Colombian population is small. Although many individuals in the old *Chibcha* area are of mixed descent, the Indian language and culture have largely disappeared. A few scattered Indian groups can still be found in the Santa Marta region, in the higher basins of the mountains along both sides of the Cauca Valley, and in the rolling forest country of Tierradentro and the upper Magdalena River. Although the Colombian Government in its official census recognizes, perhaps too conservatively, a total of 60,000 Indians today, most of these occupy the eastern two-thirds of the country, which lies outside the Highlands.

THE CHIBCHA

In Colombia, the *Chibcha* culture of Cundinamarca and Boyacá achieved an intensity comparable to that of the Central Andean pattern. The *Chibcha* are frequently compared to the *Inca*. However, the *Inca* Empire represents the ultimate expression of a pattern whose roots lie deep in the archeological past. The *Chibcha* culture has no such demonstrable antiquity.

No long-term archeological sequences have yet been established in Colombia, although certain local styles, like San Agustín in southern Colombia, may be as ancient as the Early Periods in Perú. San Agustín is famous for its varied stone sculpture, since other aspects of the culture are little known, but what preceded or followed this spectacular development is still to be discovered, and the stone-carving art seems to have had little influence on cultures elsewhere in Colombia. Other regions of the country present similar local styles, little related to each other. Only the *Tairona* sites in Santa Marta have been studied in detail, and these are apparently as recent as the *Chibcha* in time. The *Chibcha* territory has long been a rich agricultural section, but archeologists have uncovered no pre-*Chibcha* materials there, and in any case there is still no good evidence of centuries of occupation. Undoubtedly, a large part of this situation is due to the lack of sufficient archeological work, but there is some doubt that any picture will ever be presented comparable to the Central Andean region in complexity and antiquity of advanced civilization. Nonetheless, the *Chibcha* culture had advanced so far that it is frequently classed as the third highest civilization of the Americas.

Chibcha culture was based on intensive sedentary agriculture, and as such is unique in Colombia. The cultivated crops were the same as those in the Central Andean region with the exception of a few of the root plants. The principal agricultural implements were a digging stick and a wooden spade. It is doubtful if irrigation was known in pre-Spanish times, and probably the *Chibcha* were less versed than the *Inca* in the use of fertilizers and in soil conservation. This region is beyond the natural range of llamas and alpacas, so that the dog and the guinea pig were the only domesticated animals. The absence of suitable domesticated animals made the high páramos virtually worthless to the *Chibcha*.

The common weapons were the spear and spear thrower, darts, slings, and shields. The bow and arrow was known, but was not of great importance. A unique weapon was a two-bladed wooden sword. Transportation was limited to foot travel because of the lack of animals and of streams suitable for navigation.

Stones, set up at intervals in circles, mark some of the house sites, but in general, building walls were of poles, in some cases coated with clay plaster. Stone masonry and construction with adobe brick were unknown. The chiefs lived in large compounds surrounded by pole palisades. However, there were no large public works, such as large religious constructions, pyramids, mounds, or fortified sites, which would have required the organization of mass labor. The houses were arranged in villages which never grew to the size of true cities.

The craftsmanship was in many senses inferior in quality to other areas of Colombia. Ceramics were competently made, but there was no great variety of forms nor outstanding artistry in decoration. Weaving fibers were limited to the domesticated cotton. The most elaborate decoration of cloth was in painting, either with roller stamps or freehand. Copper was rare and bronze was unknown. Most metallurgy was in gold or in a combination of gold, silver, and copper, called tumbaga. Although goldworking techniques were numerous, workmanship was less competent than that of the *Quimbaya*. There was no stone carving, although wooden statues have been reported.

The clothing followed the Andean pattern: breechclout, shirt, and shawl. Footgear was not worn. Noseplugs and earplugs were common, and the body was painted with roller stamps.

The hair-cutting, naming ceremony for children, already mentioned for Northwest Argentina, the Central Andes, and Ecuador, was also practiced by the *Chibcha*. Puberty ceremonies for both sexes were of considerable importance. Burial was elaborate, especially for chiefs, although the pattern of ancestor worship was not overemphasized.

Positions of chiefs and priests descended through the matrilineal line, and there is some evidence for matrilineal descent in other aspects of the culture. Clans, however, were not very important, and property was owned individually rather than collectively. The three major classes in *Chibcha* society were the nobles, the commoners, and the slaves, that is, prisoners of war. This class system was gradually assuming caste proportions. At least, the chief or ruler was of almost divine importance, and his whole life was surrounded by complex protocol. There was also a specially trained and privileged class of warriors with their respective war chiefs.

At the time of the Spanish Conquest, the *Chibcha* had begun the organization of states and were on their way to unite the whole territory under one leader. Two loosely organized states were prominent at the time of the Conquest, and both were expanding. The conquered peoples were not incorporated with the thoroughness of the *Inca* political machine, but rather subjected to the payment of tribute.

The religious practices and beliefs were complex, but formalized religious organization was weak. A special group of priests participated in the ceremonies, but their principal function was that of an intermediary between the people and the gods. Although a long period of training was necessary in order to become a priest and although the position was inherited, the priests themselves were not formally organized. Religious centers, or temples, were but little different from the common dwellings. They did contain idols, and sacrifices, including human, were performed at them. The gods followed the Central American pattern of being departmentalized, that is, having specific functions, such as commerce or weaving, assigned to them.

Chibcha culture offered little resistance to the Spanish invaders, and since the Conquest, the language and much of the culture have disappeared. This can be explained in part by the new introductions from the Old World which made radical changes in the economy. In comparison, it is difficult to explain why the *Aymara* held on to their language and customs with such tenacity while the *Chibcha* let both slip away. An important contributing factor to the elimination of the *Chibcha* culture is the fact that the Colonial Spaniards found the *Chibcha* territory ideal for their own settlements. It was the only region in Colombia where agricultural labor was both abundant and tractable. Spanish cattle could utilize the páramo country; Spanish oats and barley grew well in the high plateau region. Unfortunately, there was no place for the *Chibcha* to retire.

FUTURE STUDIES

This brief survey of the Highland region of South America indicates clearly the need for new studies. No list of detailed studies would be practical, but a few general suggestions can be selected.

(1) **Contemporary Indian cultures.**—One of the most outstanding gaps in our knowledge of the indigenous cultures of South America is the lack of competent studies of the contemporary Indians of High-

land Ecuador, Perú, and Bolivia. Today, this is the region of the largest and most concentrated Indian population in all of South America. Furthermore, these Indians are a functioning part of the contemporary economic systems of the three countries. Still, the monographic literature is limited, and field studies rare. Recent investigations, when published, will remedy this situation somewhat, but, considering the size and importance of the area, much still remains to be done. These Indians are essentially of the old physical types, speak their aboriginal languages, and maintain much of their old culture, but they have also been deeply influenced by 400 years of European contacts. Contemporary studies face the difficult problem of dealing with a dual system, one basically Indian and one basically European in pattern. The conflicts and the integration of these two systems have never been properly studied.

(2) **Basic Andean pattern.**—In this Introduction, a cultural pattern found throughout much of the Highland region of western South America has been sketched. More detailed studies are needed to determine the significant composition of this basic pattern. The environmental setting for the development of this pattern has been emphasized, but it is obvious that a favorable environment is merely a setting, and not the final determinant.

(3) **Central Andean pattern.**—The Central Andean pattern, which culminated in the *Inca* Empire, had its roots in the archeological past. More detailed studies of the composition of the Central pattern are needed. From an archeological point of view, earlier periods in the different subdivisions, such as Chavín, Mochica, Nazca, Paracas, Recuay, Tiahuanaco, and Chiripa, should be examined in detail to determine the elements which they possess in common. Archeologists concerned with the complex problem of chronology emphasize differences in these early periods. A study of the similarities would be equally stimulating and of value in discussing the cultural history of wider areas.

(4) **Highland Andean horizons.**—As archeological knowledge advances, it will be possible to study in detail the interrelationships of the whole Highland Andean region. The Quimbaya, San Agustín, and *Tairona* cultures of Colombia have features which seem to be Peruvian in origin. In Northwest Argentina, the *Calchaquí* and *Atacameño* cultures reveal certain Tiahuanaco influences. A controlled study of these widespread influences or horizons is needed.

(5) **Andean-Amazonian relationships.**—Some authorities see strong Amazonian influence in the early stages of Andean development. Others minimize the influence of the advanced Andean civilizations on the Amazonian tribes. Studies of the interplay of Amazon and Andes are badly needed. Nordenskiöld has shown that chickens and scissors introduced on the coast of Brazil reached the Highland region of Perú in pre-Conquest times. Such evidence of rapid trade would

suggest that the Amazon and the Andean tribes were not separated by any impassible barriers.

(6) **Trends.**—In this Introduction, some cultural elements have been traced from the early archeological periods through Colonial history up to the present. More detailed and critical studies of this type are needed. A knowledge of the deeply rooted cultural factors is important in understanding the contemporary Indians. In reverse, features of modern Indian cultures which can be traced back through the Colonial history to the pre-Columbian past would aid the archeologist in many of his difficult interpretations.

(7) **Factors of cultural survival.**—In some parts of the Highlands, the aboriginal cultures have disappeared; in others they have survived. A cultural-historical study of the factors involved in the disintegration, disappearance, or survival would be a contribution to the subject of cultural dynamics.

(8) **Acculturation.**—In consideration of some of the above points, it is clear that specific studies of acculturation are badly needed. The modern Indian cultures are obviously not pure projections of the pre-Spanish patterns. The European influence has been varied and at times intense. Good acculturation studies of this region are practically nonexistent in the present literature.

(9) **Linguistic studies.**—Few studies have been made of the surviving Indian languages by modern linguists. For example, the relationship of *Quechua* and *Aymara* is still disputed. Small groups still speak distinct languages, and these should be recorded before they totally disappear.

(10) **Physical studies.**—Little work in physical anthropology has been done in the Highland region. In recent years some attention has been paid to the skeletal remains from archeological sites, but practically no studies have been made of the living Indians or the mixed populations.

(11) **Andean origins.**—Finally, the problem of the ultimate origin of the Andean cultures still awaits a solution.

SOURCES

This section is a general introduction, intended to serve as a background for the component papers of this volume. Consequently, the principal sources are the special papers themselves. Not only does each author cite the essential bibliography for his article, but also the articles themselves are original contributions. Published monographs on the contemporary Indians of the Highlands are few indeed, but the articles contained herein are frequently based on as yet unpublished field investigations. For this Introduction, no attempt is made to furnish a complete bibliography. Instead, a few general references are cited, and the reader is referred to the special articles for detailed sources.

General Highland bibliography is covered by a number of standard periodicals, such as the Boletín Bibliográfico de Antropología, México; the Boletín Bibliográfico, Lima; the Journal de la Société des Américanistes, Paris; the American Anthropologist; American Antiquity; the Revista del Museo Nacional, Lima; and Acta Americana. Likewise, some special bibliographies have been published: Jiménez Moreno (1938), Means (1928), Ortiz (1937), and Schwab (1936).

Standard geographical sources furnish information on the Highland topography and environment, and particular reference is made to James (1942), Romero (1939), and Troll (1931–32). Hrdlička (1912) summed up the early evidence on fossil man, and more recent references on ancient man and migrations will be mentioned in the Handbook, vol. 5. The bibliography on plant domestication is enormous, and only a few selected titles are cited here: Herrera (1939, 1940), Manglesdorf and Reeves (1939), Sauer (1936), and Yacovleff and Herrera (1934–35).

Few sources are available for the Highland region as a whole, although it is covered in part by a number of general works: The Maya and their Neighbors (1940), Bastian (1878–89), Joyce (1912), Krickeberg (1922), Linné (1925), Radin (1942), Thompson (1936). For the individual countries the literature is more extensive, although complete summaries are few. Only a sample of the many sources is given here: for Colombia, Bennett (1944 a), Hernández de Alba (1938 a), Schottelius (1941 a); for Ecuador, Jijón y Caamaño (1940–41); for Perú, Johnson (1930), Markham (1871), Means (1931), Poblete Troncoso (1938), Tello (1942); for Bolivia, Bandelier (1910), LaBarre (n. d.), McBride (1921); for Northwest Argentina, Boman (1908), Bregante (1926), Debenedetti (1912), Serrano (1930); for Chile, Brand (1941 a, 1941 c), Latcham (1938 a).

Many authors have made estimates of the Highland populations, but few of these represent careful consideration of the problem. Among the better sources are Brand (1941 c), Forbes (1870), Kroeber (1939), LaBarre (n. d.), Rosenblatt (1935), Willcox (1931).

The analysis of the Central Andean pattern is based on many sources, some of which are cited in the archeological article on Perú-Bolivia. A few of the pertinent references are cited here, excluding those already mentioned above: Baudin (1928), R. and M. d'Harcourt (1924, 1925), Hewett (1939), Izikowitz (1935), Kroeber (1925 a, 1927), Larco Hoyle (1938, 1939), Lothrop (1937 a), Mead (1924), Means (1932), Montell (1929), O'Neale and Kroeber (1930), Root (n. d.), Smith (n. d.), Tello (1938).

The tribes marginal to those of the Central Andes, as well as the *Chibcha* and the *Araucanians*, are all treated in separate articles, and the sources cited therewith. For future studies, special reference is made to Nordenskiöld (1922) and Steward (1943).

PART 2. THE CENTRAL ANDES

THE ARCHEOLOGY OF THE CENTRAL ANDES

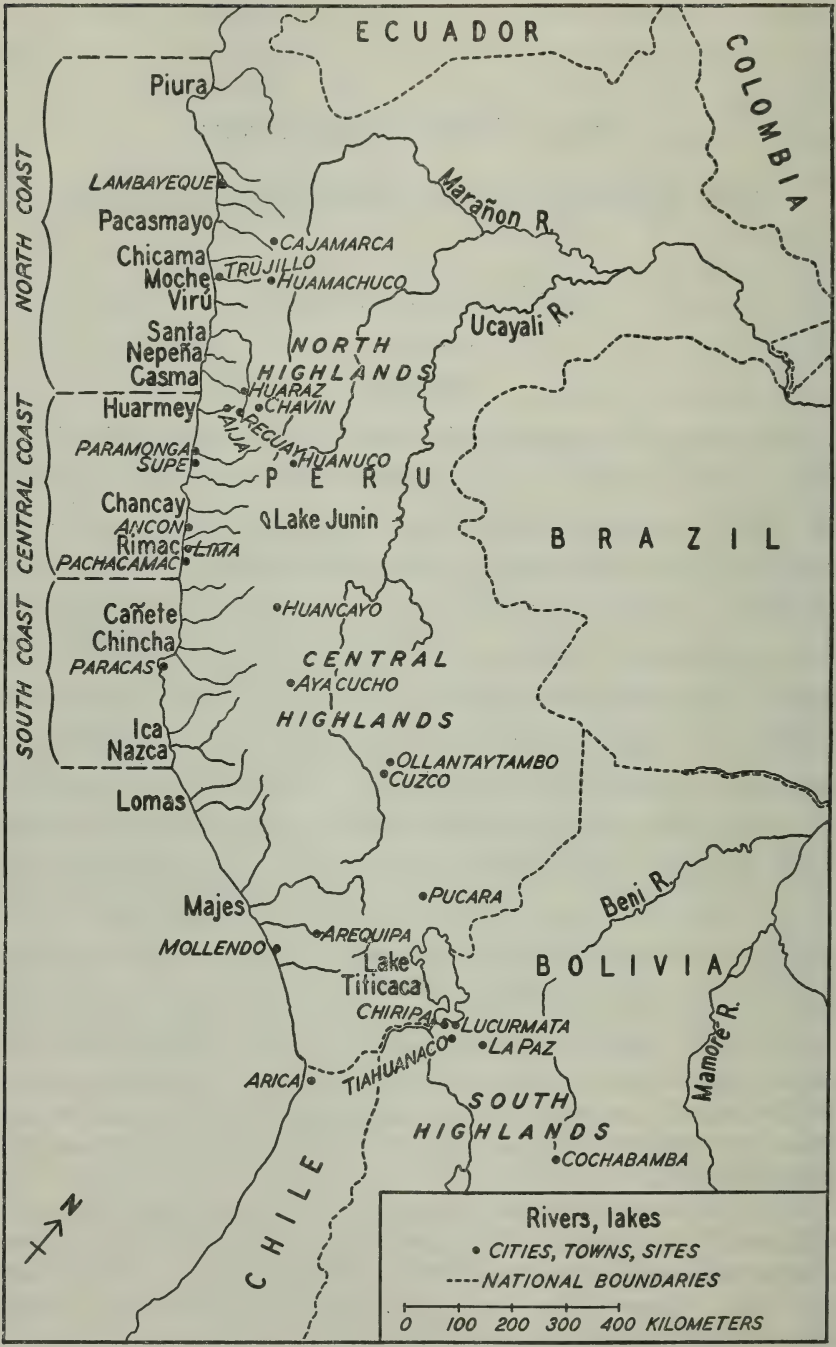
By WENDELL C. BENNETT

PREFACE

This survey of the archeological past of the Andean region is limited to the Highlands of the contemporary countries of Perú and Bolivia, and to the Pacific Coast of Perú (map 1, *No. 1*). The tropical lowland section to the east of the Andes in both countries is not included because it lies outside of the area dominated by the Andean cultures. Although Highland Ecuador, Northwest Argentina, and North Chile did form part of the *Inca* Empire in its late phase, they are not included in this survey, but are reserved for separate treatment. The archeological periods of Perú and Bolivia are so intertwined, however, that they can well be treated in a single section.

The region of Perú and Bolivia is one of the most important archeological fields of South America (map 2). This is true in reference to the extent and variety of materials and their implications of comparatively advanced civilizations. Surface ruins are numerous in the region, including such features as cities, pyramids, buildings of various kinds, irrigation canals, roads, and extensive cemeteries. These remains represent several time periods, and suggest that the Perú-Bolivia region was the center of high civilization in South America for many centuries before the Spanish Conquest. Both private individuals and public museums have long been collecting Peruvian archeological material. Enormous quantities of sculpture, pottery, textiles, metals, and other artifacts are available for technical studies. These collections are utilized by art students as well as archeologists and technicians.

The interest in the archeology of the Perú-Bolivia region is enhanced by the fact that the *Quechua* and *Aymara* Indians still form a large percentage of the population of the Highland regions of both countries. These Indians still speak their native languages, live in their old territory, and preserve many of their past customs. Obviously, after 400 years of European contact, their culture is a mixture, but a mixture in which the Indian elements are predominant. Conse-


ECUADOR
COLOMBIA
NORTH COAST
CENTRAL COAST
SOUTH COAST
Piura
LAMBAYEQUE
Pacasmayo
Chicama
Moche
Virú
Santa
Nepeña
Casma
Huarmey
PARAMONGA
SUPE
Chancay
ANCON
Rimac
PACHACAMAC
Cañete
Chincha
PARACAS
Ica
Nazca
Lomas
Majes
MOLLENDO
ARICA
Marañon R.
CAJAMARCA
TRUJILLO
HUAMACHUCO
NORTH HIGHLANDS
Ucayali R.
HUARAZ
CHAVIN
AIJA
RECUAY
HUANUCO
PERU
Lake Junin
LIMA
BRAZIL
HUANCAYO
CENTRAL HIGHLANDS
AYACUCHO
OLLANTAYTAMBO
CUZCO
PUCARA
AREQUIPA
Lake Titicaca
CHIRIPA
LUCURMATA
LA PAZ
TIAHUANACO
Beni R.
BOLIVIA
Mamoré R.
SOUTH HIGHLANDS
COCHABAMBA
CHILE
N
Rivers, lakes
• CITIES, TOWNS, SITES
----NATIONAL BOUNDARIES
0 100 200 300 400 KILOMETERS

MAP 2.—Archeological sites and regions of the Central Andes (Perú-Bolivia area). (Revised from Kroeber, 1944.)

quently, knowledge of the archeological past, the unwritten history of these Indians, is of importance.

THE REGION AS A WHOLE: ARCHEOLOGICAL UNITY

The Perú–Bolivia archeological region forms a unit which can be compared with other archeological areas in South, Central, and North America, not to mention the Old World. The unity is more than geographical. A trained person can generally recognize a specimen from this region regardless of its time period. Throughout the archeological past, the Perú–Bolivia area has lacked many things which are important elsewhere, such as any knowledge of the wheel or the arch, writing or dating, urn burial, and tetrapod ware. Such negative factors could be multiplied, but positive points are needed to explain the unity of the region as a whole. Some of these are listed below.

(1) The basic subsistence of agriculture and herding was essentially the same in all periods, although the details vary in terms of the environment. The cultivated food plants that were known in all periods are maize, beans, squash, potatoes, manioc, quinoa, and oca. Coca chewed with lime was the standard narcotic, rather than tobacco. Domesticated llamas and alpacas were utilized for meat, wool, and transportation in all periods, although their natural habitat is in the Highlands.

(2) All periods knew the same building materials, although the environment influenced the selection somewhat. Adobes were used for building on the dry Coast, stone more commonly in the Highlands. Advanced stone masonry is not a common achievement for all periods, but has a wide distribution.

(3) The same major crafts were developed in all periods. These include pottery, weaving, metallurgy, and architecture, as well as such minor crafts as basketry, shell inlay, featherwork, and wood carving.

(4) Individual distinctions in social rank, specialized priesthood, complex religion, good military organization, and perhaps the clan were always present, insofar as can be judged from the archeological materials.

(5) Certain general trends follow throughout the time periods, irrespective of geographic divisions. Early Periods everywhere emphasized realistic or naturalistic design and individual skill in craftsmanship. The Middle Periods are marked by conventionalized designs. Late Periods prefer geometric patterns, culminating in the *Inca* Period, which is frankly geometric. A general reduction in color range is noticeable from Early to Late Periods. Likewise, a gradual growth from the Early Period villages to the Late Period cities is seen in most areas.

In résumé, the differences in archeological periods throughout Perú and Bolivia are essentially those of selection and emphasis rather than startling contrasts in basic techniques or materials. Weaving furnishes an excellent illustration. The basic fibers in all periods are wool and cotton, in spite of the fact that wool was essentially a Highland product and cotton was limited to the Coast. Furthermore, the basic weaving techniques were known throughout all the periods, and no improvements were made on the standard girdle-back loom. The differences in textiles from region to region, or from period to period, are essentially due to selection or preference for certain techniques and designs, rather than radical changes in technology.

This unity of achievement in Perú and Bolivia, regardless of geographical and time differences, implies that the total development was relatively independent of the rest of the Americas. This does not deny the possibility of external influences from Colombia, Central America, and the Amazon, but rather suggests that the region was sufficiently advanced and organized to resist any wholesale migration or influence from the outside.

PROBLEMS

In a region as large as the one treated here and one which maintained a comparatively complex civilization for many centuries, the number and variety of problems involved in the study of the materials are myriad. A few samples are discussed below:

(1) **Chronology.**—The major emphasis of archeologists working in the Andean region is and has been chronology. The absence of any written records or calendrical dates has made it imperative to arrange the mass of materials in this region in at least a relative chronological order. The techniques which have so far been employed in the chronological studies are standard practices in archeological work, such as stratigraphy in refuse sites, building stratigraphy, grave overlapping, combination of building and grave stratigraphy, grave isolation, unit-site isolation, developmental sequences in art styles, the use of historical materials, and distribution reconstruction. In spite of all this, more refinements are necessary. No attempt has yet been made to apply the science of tree-ring dating to the Andean region. Practically all the chronological studies have so far been based on ceramics, which are the best preserved and the easiest to handle. It is equally important, however, to include other materials such as textiles, metals, stone carving, and masonry. A sound Andean chronology is important for cross-dating all South American archeology, and it is equally basic for numerous other types of study, such as the tracing of art sequences.

(2) **Trends.**—The Perú-Bolivia region presents a long and complex archeological past, good historical source material on the *Inca* at the time of the Conquest, and, finally, numerous living Indians who still

preserve their language and much of their old culture. Thus there are excellent opportunities for tracing long-term cultural trends. There are, unfortunately, some limitations since the archeology presents an incomplete picture. The material culture of the past civilization is the best represented, and even here preservation factors are unequal in different regions. Archeological interpretations of the social culture must always be treated with caution. Certain evidence is, however, available. Painted and modeled ceramics may portray the bird and animal life of the time, the type of dress, and general scenes of social activities. Occupation and subsistence can be determined in part from direct evidence, such as remains of plants, irrigation projects, and cultivated fields. Burials furnish considerable information about practices pertaining to the treatment of the dead. The ruins themselves furnish good evidence about the size of villages, the types of houses, the religious structures, and fortifications. Considerable validity can be given to such interpretations if they are checked by studies of contemporary Indian ethnology and by the description of the *Inca* at the time of the Conquest. The problem, then, of tracing long-term trends is one of major importance.

(3) **Cultural development and geography.**—An interesting and important problem concerns the relationship of topography and environment to cultural development in different archeological periods. Many of the factors which determine contemporary settlement in the Peruvian Highlands were also effective in the past. However, the mountains and deserts which are such difficult barriers to contemporary transportation were apparently much less so when all transportation was by foot or by llamas. Many studies could grow out of this general problem.

(4) **Cultural contacts.**—A study of the influence of the Andean civilization on other areas of South America is important, and the reverse is equally so. Also, studies of contacts within the Perú-Bolivia area should be made, emphasizing such factors as trade, migration, diffusion, and conquest.

(5) **Technical studies.**—Such materials as textiles and metals can be subjected to technical studies by themselves. Some such studies have already been made, principally on the textiles. The fineness of the thread and the complexity and variety of weaving techniques have been carefully analyzed, and the Peruvian achievement has been measured in terms of hand weaving throughout the world. In metallurgy, the techniques and processes can be determined from the specimens. Other types of technical studies could be made, including architecture, city planning, and farming methods.

(6) **Art studies.**—Much attention has already been given to Peruvian archeological material by art students. Studies can be made of design or modeling or sculpture, and also, in connection with

chronological evidence, of the art developmental sequences. Only a few studies have been initiated of the influence of one medium, such as textile pattern, on another, such as ceramic painting.

SOURCES

The archeological bibliography for the Perú-Bolivia region is very extensive. It is impractical to mention any but a few of the numerous titles for this area. Fortunately, some excellent bibliographies exist: Dorsey (1898), Means (1928), Richardson and Kidder (1940), Schwab (1936). Likewise certain journals devote sections to bibliography in this field, such as the Journal de la Société des Américanistes de Paris; the Boletín Bibliográfico de la Universidad Mayor de San Marcos, Lima; the Boletín Bibliográfico de Antropología Americana, México; and the Handbook of Latin American Studies, Cambridge, Mass. Finally, specialized bibliographies are found in many of the monographs cited here.

Pre-nineteenth century sources of value for the archeologist are few. The early chroniclers are of some use, but their principal interest is for the study of *Inca* ethnology. Consequently, bibliographic references to them will be found in that section of the Handbook. A few, like Cieza de León, give descriptions of ruins and statues; but the majority are of value in portraying life at the time, which serves as an aid in interpreting the archeological remains.

The travelers of the 19th century, although not trained archeologists, were good observers, and consequently their writings are valuable source materials. Some of the outstanding ones are: Bastian (1878), Castelnau (1852), Middendorf (1894), D'Orbigny (1867), Rivero and Tschudi (1851), Squier (1877), Wiener (1880).

A number of authors treat the Perú-Bolivia field as a whole, either from the point of view of archeological résumés, special topics, or art studies: Baessler (1902–1903), Doering (1936), Fuhrmann (1922 a, 1922 b), Raoul and Marie d'Harcourt (1924), Hewett (1939), Joyce (1912), Kelemen (1943), Kroeber (1944), Langlois (1935–36), Lehmann and Doering (1924), Mead (1924), Means (1931), Muelle and Blas (1938), Schmidt (1929), Seler (1893), Tello (1929, 1942), Thompson (1936), Wasserman-San Blas (1938).

The materials in this section have been presented from the point of view of time period and geographical location in one of six major areas. Bibliographical sources are best cited in terms of the geographical divisions, since most accounts deal with more than one time period. Some of the outstanding sources for the six regions are listed below.

For the North Coast of Perú.—Bennett (1939), Holstein (1927), Kroeber (1925 a, 1926 a, 1930 a, 1930 b, 1944), Larco Hoyle (1938–39, 1941), Muelle (1936), Tello (1938), Uhle (1913 a).

For the Central Coast of Perú.—Gayton (1927), Kroeber (1925 b, 1926 b), Muelle (1935), Newman (n. d.), Reiss and Stübel (1880–87), Strong (1925), Strong, Willey, and Corbett (1943), Uhle (1903, 1908), Villar Córdova (1935).

For the South Coast of Perú.—Berthon (1911), Doering (1927), Gayton and Kroeber (1927), Kroeber (1937), Kroeber and Strong (1924 a, 1924 b), Putnam (1914), Tello (n. d.), Uhle (1913 b), Yacovleff and Muelle (1932).

For the North Highlands of Perú.— Bennett (1942, 1944 b), Kinzl (1935), McCown (n. d.), Tello (1923, 1930).

For the Central Highlands of Perú.—Bingham (1913, 1915 a, 1915 b, 1916, 1922, 1930), Fejos (1944), Franco Inojosa (1935, 1937), Franco Inojosa and Gonzalez (1936), Markham (1910), Means (1938), Pardo (1937), Rowe (1945), Tello (1937), Valcárcel (1934 a, 1934 b, 1935 a, 1935 b).

For the South Highlands of Perú and Highland Bolivia.—Bandelier (1910), Bennett (1934, 1936), Casanova (1942 c), Franco Inojosa and Gonzalez (1936), Kidder (1943), Posnansky (1914), Stübel and Uhle (1892), Tschopik (n. d.), Valcárcel (1935 c).

Archeological materials in Perú and Bolivia have been the subject of special technical studies. Although many of the sources already cited deal with architecture, ceramics, metallurgy, and weaving, a few specialized studies are cited below.

For special studies of metallurgy.—Baessler (1906 a), Lothrop (1937 a), Mead (1915), Nordenskiöld (1921).

For special studies of the Peruvian quipu and calculation.—Locke (1923), Nordenskiöld (1925 a, 1925 b), Wassén (1931).

For special studies of textiles and weaving techniques.—Baessler (1906 b), Crawford (1915, 1916), d'Harcourt (1934), Levillier (1928), Means (1930), Montell (1929), O'Neale (1937, 1942), O'Neale and Kroeber (1930), Stafford (1941), Yacovleff (1933).

GEOGRAPHY

This brief review of the general geography of Perú and Bolivia is intended to relate certain geographic features and divisions to the archeological past. Since there are no indications of important climatic changes during the time period considered, the environmental characteristics of contemporary Perú and Bolivia are also applicable to the archeological past. The excellent preservation of delicate textiles in the dry sand graves, and the remarkable condition of many early adobe buildings, testify that the Coastal desert conditions have long prevailed.

Geographically, Perú is commonly described in terms of three vertical strips: the desert Coast, the high Andes, and the Montaña or eastern slope of the Andes, which merges into the Amazon jungle. An analysis of the archeological materials shows that these three strips did not always produce the sharp cultural divisions that the contrasting environments would suggest. On the other hand, such environmental factors are always of importance in the over-all interpretation. The most extensive archeological work has been carried out on the Coast and in the Andes, and consequently the history of these two strips is reasonably well known. The Montaña region has received so little attention archeologically that its ultimate importance can only be guessed at. It is generally conceded that the Andean civilizations did not penetrate deeply into the true Amazon tropics. On the other hand, it may ultimately be shown that the Andean cultures drew heavily on the varied resources of the Tropical Forests and the Montaña. A number of archeologists have stressed the probable importance of the Amazon region, particularly in the initial developmental stages of the Andean civilizations. The Montaña will be described in the Handbook, volume 3.

The Pacific Coast of Perú and North Chile is the most desert region of South America. Topographically, the Coast is composed of piedmont plains; mountain spurs which run transversely to the Andes; some traces, particularly in North Chile and southern Perú, of an old Coastal mountain range; and a series of rivers which originate in the Andes and flow into the Pacific. There are some 25 principal rivers on the Peruvian Coast, as well as a number of unimportant ones. Although the flood plains of some of the rivers merge, most of them are separated by a good stretch of desert as well as by mountain spurs. The rivers are classified as permanent, semipermanent, or sporadic, depending on whether they head in the continental watershed or not. Most habitation on the Coast of Perú depends on the river valleys and irrigated agriculture. Farm land is limited but exceptionally fertile.

In preagricultural times, the Coast of Perú must not have been very attractive, Fishing and collecting shellfish would have supported a certain population, and it is possible that wild-plant collecting and hunting were once profitable in the valleys. Evidence for such suppositions has been obscured or obliterated by many centuries of intensive cultivation with irrigation, so that it is difficult to discover what the original wild-plant and animal life was like. It would also follow that agriculturists could make little use of the Coastal valleys without a good knowledge of irrigation since most cultivation would be limited to the flood plains of the rivers. On the other hand, once the valleys were settled by agriculturalists with a good knowledge of irrigation, the development of high civilization would be possible. The climate is not severe. The land is fertile. The mountain spurs and desert stretches which separate valleys make them relatively easy to defend. Materials for building, such as adobe and stone, are plentiful, and fishing and some hunting would supplement the agricultural produce.

Each of the major valleys on the Coast of Perú is in itself a unit with an independent cultural history. However, during some periods adjacent valleys might share the same development or be dominated by the same culture. Consequently, for descriptive purposes, several valleys can be grouped together. The valleys included in such a grouping may not be the same in every time period, however, and throughout the archeological history of Perú, the cultures always show a tendency to revert to valley independence. In general, a division into North Coast, Central Coast, and South Coast valleys is satisfactory, but in any particular study a division into smaller units is necessary.

The dryness of the Coast of Perú preserves materials, particularly when buried in cemeteries in the desert sands. Such perishable objects as textiles, calabashes, featherwork, wooden artifacts, and plants are all well preserved. This is apt to give the false impression that the Coast cultures were more advanced than those in the rainy Highlands, where preservation is bad.

The Highland region of Perú and Bolivia presents many contrasts in topography and environment. Much of the terrain is uninhabitable because of the high altitudes and the barrenness. The habitable parts are largely intermont plateaus, of which the altiplano in southern Perú and Bolivia is the largest. Life is also possible in the deep river valleys which cut through the mountain chain. Most of the Highland region is unforested, and great stretches of the territory are classed by geographers as grassland, bushland, or even desert. Because of the altitude, the climate is cold throughout the year but freezing temperatures are rare in the inhabited sections. The range in temperature throughout the 24 hours of the day is great. Most of the region receives ample rainfall in the season from December to March.

The wild-animal life today is limited, although vicuña, viscacha, fox, chinchilla, deer, and game birds are available. However, both the llama and the alpaca were domesticated from some wild form like the vicuña or guanaco, and there are other indications that game was far more abundant in the past. The same can be said for wild plants, since this is one of the regions in which potatoes, quinoa, oca, and arracacha may have been first domesticated. In contrast to the Coast, the Highland region was probably quite attractive to early hunting and gathering groups, although traces of these have not yet been found by the archeologists. For agriculturists, there are also numerous advantages in the high mountains. Stone and adobe are available for building materials, although wood, in general, is absent. There is clay for pottery, wool for weaving, grass for plaiting, and reeds in the lakes for making mats and boats. Likewise, the Andes are rich in minerals; and copper, silver, gold, tin, and mercury were all utilized in pre-Spanish times.

The present population clusters in the Highlands correspond closely to those of the past with the exception of some of the modern mining centers. These population clusters are found in natural areas, such as plateaus or mountain river valleys, where land is available for subsistence agriculture, and where grasslands are available for pasturage. The clusters are separated from each other by stretches of virtually uninhabitable mountain wastes. Each of these clusters represents an archeological unit with distinct cultural features. Some of the principal clusters are:

(1) The Cajamarca region of the far North Highlands.
(2) The Huaraz region in the Callejón de Huaylas.
(3) The Huánuco region.
(4) The Mantaro River region.
(5) The Cuzco region in Central Perú.
(6) The Arequipa region.
(7) The Puno region in southern Perú.
(8) The Altiplano region of Bolivia.
(9) The Eastern Cordillera region of Bolivia.

In contrast to the Coast, preservation is poor in the Highlands. Objects of ceramics, stone, some bone, and some metal are preserved, but other materials usually disintegrate. Consequently, much of the evidence for the arts and crafts is based on analogy and on indirect evidence. Furthermore, conditions of life in the Highlands seem quite severe. Warm clothing and good housing are necessary. The scarcity of fuel is a major problem. Available land for agriculture is limited, and many crops will not grow in the high altitude. In spite of the fact that the Highlands seem far more limited in potentialities than the Coast, the archeological history shows that they have always played a dominant role.

For the purposes of this section, the cultural-geographical areas have been grouped into six major regions (map 2). This is dictated in part by a desire for simplification, but also because of the availability of archeological evidence. Insufficient work has been done in many of the areas to justify separate treatment. The six major regions discussed in this section are:

(1) *The North Coast.*—Theoretically all the Coastal valleys between Casma and Piura are included, but practically the discussion is limited to the three adjacent valleys of Virú, Moche, and Chicama.

(2) *The Central Coast.*—The valleys from Lurin to Huarmey are included with special attention to the Rimac, Ancón, Chancay, and Supe Valleys.

(3) *The South Coast.*—The valleys from Río Grande (Nazca) to Cañete, with special attention to the Nazca, Ica, and Pisco (Paracas) Valleys.

(4) *The North Highlands.*—The region of the Callejón de Huaylas and the Chavín section of the Marañon River are included here.

(5) *The Central Highlands.*—The region around the town of Cuzco is covered.

(6) *The South Highlands and Highland Bolivia.*—The Puno region of Perú and the altiplano of Bolivia are grouped together in this category.

CHRONOLOGY

At the present time, there is no absolute chronology in Andean archeology. The only concrete date is 1532, the year of the arrival of the Spaniards in their historic conquest of the area. Otherwise, calendrical dates are guesses and, furthermore, prospects of obtaining accurate dates on the basis of internal evidence are meager. There was no writing in pre-Spanish Perú, no dated stones, no evidence of a recorded calendar. So far no one has attempted tree-ring dating, and the material present does not seem to be well adapted to this type of work. Consequently, archeological dating in Perú and Bolivia must be in terms of relative chronologies. These involve two major factors: one, geographic location; and two, time sequence.

On the Coast of Perú each valley can be considered as a separate unit, as can each of the inhabited areas in the Highlands. Within a valley or an isolated Highland area, a relative sequence can be set up showing the succession of different styles and periods. Once this has been accomplished, adjacent valleys or areas can be compared. In many cases, it can be demonstrated that a cluster of valleys on one part of the Coast has comparable sequences or overlapping styles.

The problem of linking local time sequences in valleys or areas which are widely separated is more difficult, but can be approached by examining styles which have a wide distribution, trade pieces, and the like. Geographic distance is, however, always difficult to interpret in terms of time. For example, a distinctive style in a Central Coast valley appears also in a North Coast valley, but it is exceedingly difficult to estimate the length of time necessary for such a wide distribution. If the style spread because of military conquest, only a short time factor would be involved; but if it spread by gradual infiltration, then the time might be exceedingly lengthy. To some extent the time factor can be judged by detailed comparison of the styles in the two valleys.

Unfortunately, few of the Coastal valleys or the Highland areas in Andean region have local sequences satisfactorily established. Much more work is needed, but there is no doubt that, as the gaps are filled, a trustworthy relative chronology for the whole Perú-Bolivia region can be established. The broad outlines have already been laid down although many points are still unsatisfactory, particularly those involving the relationship between Coastal and Highland regions.

A résumé of the generally accepted sequences so far established is given in the "Chart of Perú-Bolivia archeological periods", on page 80. All the six major geographical divisions are represented, namely, the South, Central, and North Coasts, and the North, Central, and South Highlands. The Central Highlands division appears incomplete because, in spite of extensive investigation, so far only one style has been discovered which is demonstrably older than the classic *Inca* Period.

The valleys and areas chosen to represent the major geographical divisions are those in which archeologists have established sound local sequences. Major periods are indicated by capitals; styles, not isolated as periods, by small letters. The period names correspond to those used in this report, although a few alternative names are indicated by parentheses. The relative time of a style or period is suggested by its horizontal position as indicated by the general divisions in the column at the extreme left. The suggestion of dates by centuries is a gross approximation, but on the conservative side according to most authorities. Some would extend the whole chart back several centuries before the Christian Era.

The Nazca and Ica Valleys are selected for the South Coast because between them a good sequence can be established. The nearby site of Paracas is included because it is of special importance. The intermediate South Coast valleys of Chincha and Cañete do not have complete sequences and so are not included in the chart. By combining the four valleys of Lurin, Rimac, Ancon, and Chancay, a fairly good sequence for the Central Coast can be established. Although every period has not been found in each of these valleys, it is highly probable that future excavation will remedy this. On the North Coast, a fairly complete sequence has been outlined for the valleys of Virú, Moche, and Chicama. To the south, the valleys of Casma, Nepeña, and Santa are not included, although they present very interesting material. Of the valleys north of Chicama, only Lambayeque has been investigated with any intensity, and even there the sequence is far from final. The North Highlands are here represented basically by Chavín and the Callejón de Huaylas, but reference to Huamachuco is also included. The Central Highlands cover only the Cuzco region. The South Highlands are combined with Bolivia for a sequence represented by Puno in Perú and Tiahuanaco in Bolivia. Other Highland regions have been too little studied for inclusion in this chart.

Andean archeologists have long used the terms Early, Middle, and Late Periods to refer to the gross time divisions preceding the *Inca*. Today, it is well established that a Chavín horizon precedes what was formerly called the Early Periods. Consequently, the terminology for the major time divisions will have to be revised, since terms like pre-Early are confusing. For the time being, the chronological divisions can be designated as the Chavín Periods, the Early Periods, the Middle Periods, the Late Periods, and the *Inca* Periods. Likewise, it is possible to speak of three pan-Peruvian horizons, namely, Chavín, Tiahuanaco, and *Inca*. Each of these three widespread styles is separated by a respectable time interval in which local styles are developed in the different geographic areas.

The Chavín horizon is the earliest yet isolated in the Peruvian region. Chavín style has been found in early sites unmixed with other known styles in the North Highlands of Perú, on the Central Coast, on the North Coast, and as a minor design influence in the Cavernas Period of Paracas on the South Coast. The North Highlands site of

Chavín de Huántar seems the most logical center of distribution although there is no final evidence for this.

In the interval between the pan-Peruvian Chavín horizon and the Tiahuanaco horizon, local cultures dominate the major geographic areas. The distinctive Nazca style appears on the South Coast and the Mochica style develops on the North Coast. On the Central Coast, the Early Period interval is occupied by the White-on-red and the Interlocking styles, and in the North Highlands, Chavín is followed by the Recuay style.

The second pan-Peruvian horizon is Tiahuanaco. Its center of origin and distribution seems to be the altiplano of Bolivia around Lake Titicaca. In this region, the Tiahuanaco style dominates the archeological scene almost up to the *Inca* time. Tiahuanaco-influenced styles have a wide distribution in Bolivia, Perú, Chile, and Argentina. In Perú, the style is found in quantity on the Central Coast, on the North Coast, and on the South Coast, where it mixes with the last phases of the Nazca style. In the North Highlands, a Tiahuanaco style follows the Recuay Period. On the Coast, the Tiahuanaco Period soon breaks up into a number of local styles. Somewhat later, a Coastal reformulation of Tiahuanaco, called the Black-white-red geometric style, has a limited distribution. The basic Tiahuanaco plus the local break-down followed by the Black-white-red geometric forms the Coastal Middle Period. In reality, much of this development is independent of the Bolivian Highlands.

Following the Tiahuanaco-influenced Middle Periods, new local styles were developed, such as the Ica style on the South Coast, the Chancay Black-on-white style on the Central Coast, and the *Chimu* style on the North Coast. These Late Period styles inherit a great deal from the Middle Periods, but are still quite independent. The *Chimu* style also shows a revival of many elements from the Early Period Mochica style.

The final pan-Peruvian horizon is the *Inca*. The center of origin and distribution is the Cuzco region in the Central Highlands, where *Inca* material is found in great abundance and where the *Inca* maintained their capital. At the time of the Spanish Conquest, the *Inca* were in political control of all of Perú and Bolivia as well as parts of Ecuador, Northwest Argentina, and Chile. The archeological remains confirm this wide distribution.

In the Perú-Bolivia region, no trace has yet been found of early nomadic hunters nor of prehorticultural or preceramic material. There is likewise no good evidence for the early stages of agricultural or ceramic development. However, it still seems probable that early nomadic hunters passed through the region at one time, and recent botanical evidence points to the Andean region as one of the potential centers for the original domestication of such plants as manioc, potatoes, and even corn. There are large shell heaps on the Coast of Perú which may ultimately produce evidence of these early stages, but so far little excavation had been effected. A number of reasons can be suggested why evidence of these early stages has not yet been discovered. One, the region is a large one in which relatively little scientific work has been done. Two, the remains of such early stages may well have been obscured or obliterated by some 2,000 years of intensive agricultural occupation. Three, archeologists have been too occupied in the study of the advanced cultures to concentrate on the search for early ones. Four, early remains are nowhere elaborate and therefore are difficult to identify. In fact, they are usually first discovered by accident.

Someday it may be possible to cross-date Peruvian and Central American materials. That the high civilizations of the Andean region and those of Central America had the same basic culture is evident in the common food plants, such as maize, beans, and squash; in the terraced and irrigated agriculture; in the development of such crafts as ceramics, metallurgy, and weaving; in the types of stone and adobe masonry; in the similarity of construction techniques; in the patterns of grouping temples, pyramids, sunken courts, and inclosures; in the use of the corbeled arch; and in numerous other generalized points. At the same time, detailed similarities in styles, ceramic shapes, techniques, and the like have not been satisfactorily demonstrated between the Andean region and Central America. Until valid relative chronological sequences have been established for Ecuador and Colombia, there is little possibility of cross-dating the Peruvian region with Central America.

TERMINOLOGY

There is considerable variation in terminology for styles and periods among the Andean archeologists. The accompanying chart (p. 80) follows the terminology used in this section of the Handbook and is based, for the most part, on published accounts. For convenience, a list of standard and alternative terms follows, utilizing the chart as a basic outline.

1. Chavín Periods:

Chavín. A standard term for the site of Chavín de Huántar, the style, and the period wherever found. Some authors limit the usage so that the term refers only to the Highland style.

Coast Chavín. The Chavín coastal style and sites.

Cupisnique. A variant term for the Coast Chavín.

Chongoyape. Coast Chavín style from a site in Lambayeque Valley.

Nepeña. Coast Chavín style from a site in Nepeña Valley.

Early Ancon. Coast Chavín style from shell heaps at Ancon.

Puerto de Supe, Primitive Ware. Coast Chavín style from shell heaps at the port of Supe Valley.

Cerro Sechín style. From a site in Casma Valley with carved stone pillars and blocks which seem distantly related to Chavín.

Moxeke style. From a site in Casma Valley with relief clay carvings related to the Coast Chavín style.

El Salinar. Newly discovered style, and perhaps period, in Chicama Valley, combining certain Coast Chavín and White-on-red style features. Thought to be intermediate between Coast Chavín and Mochica.

2A. Early Periods, South Coast:

Nazca. Standard term for polychrome style of South Coast.

Proto-Nazca. Alternative term for Nazca.

Early Nazca. Alternative term for Nazca.

Nazca-A. Early stylistic division of Nazca.

Nazca-B. Stylistic division of Nazca.

Nazca-X. Stylistic division of Nazca, transitional between Nazca-A and Nazca-B.

Pre-Nazca. Alternative term for the Nazca-B style, which is thought by some writers to be earlier in time than Nazca-A.

Chanca. Generic term for a Highland style related to Nazca-B.

Paracas. The name of a site on the Pisco Peninsula, but frequently used as an over-all term for the two related periods at that site.

Paracas Cavernas. One period and style at the site of Paracas.

Paracas Necropolis. Another period and style at the site of Paracas, usually considered to be slightly more recent than Cavernas, and distantly related to Nazca.

Cerro Colorado style. Alternative term for Paracas Cavernas, and sometimes for Paracas in general.

Ocucaje. Ceramic style in Ica Valley related to one or both of the Paracas styles.

Early Chincha. An early incised ware in Chincha Valley.

Proto-Chincha. An alternative term for Early Chincha.

2B. Early Periods, Central Coast:

White-on-red (W-on-R). Standard term for style and period found in Chancay Valley and elsewhere.

Interlocking. Standard term for style and period on the Central Coast, at Chancay and Pachacamac and elsewhere. Once thought to antedate the White-on-red.

Intermediate. A transitional period between White-on-red and Interlocking at Chancay.

Wari. Term for a generic style in the Highlands along the Mantaro River, with some relationship to the Interlocking style.

Wanka. Alternative term for Wari.

Negative. A style, not a period, found mixed with the Interlocking at Pachacamac.

Early Lima. A composite style with a number of strains which may or may not be contemporaneous. Found at Nievería and elsewhere in the Rimac Valley, and thought by some to antedate the Coast Tiahuanaco Middle Periods.

Proto-Lima. Alternative term for Early Lima.

Nievería. Alternative term for Early Lima.

Aramburú. Alternative term for Early Lima.

2C. Early Periods, North Coast:

Mochica. Generally accepted term for the white and red, modeled ceramics and period of the North Coast valleys.

Muchik. Alternative term for Mochica.

Early Chimu. Alternative term for Mochica.

Proto-Chimu. Alternative term for Mochica.

Early Moche. Alternative term for Mochica, in the Virú, Moche, and Chicama Valleys.

Mochica-I. Stylistic subdivision of Mochica.

Mochica-II. Stylistic subdivision of Mochica.

Chimbote style. Alternative term for Mochica–II.

Gallinazo. A style and period isolated at Gallinazo ruins in Virú Valley. Thought by some to follow Mochica, but other authorities would like to place it earlier.

Negativo. Alternative term for Gallinazo.

Tipo Nepeña. Unusual alternative term for Gallinazo.

Middle Moche I. Alternative term for Gallinazo.

2D. Early Periods, North Highlands:

White-on-red. Style found near Huaraz, probably related to Coast Period of same name.

Recuay. Style and period named after sites in the vicinity of the town of Recuay.

Recuay–A. Stylistic strain in Recuay Period.

Recuay–B. Stylistic strain in Recuay Period.

Andean Archaic. Stylistic strain in Recuay Period, thought by some authorities to be a distinct period.

Huaylas–I. Alternative term for Andean Archaic.

Huaylas–II. Alternative term for Recuay.

Lagenaria. Alternative term for Andean Archaic.

2E. Early Periods, South Highlands and Bolivia:

Tiahuanaco (*Tihuanacu, Tiawanako*). Name of a site, a style, and a period in the Highlands of Bolivia. Also used as a general term for the style wherever found.

Early Tiahuanaco. A pre-Tiahuanaco style and period found at the site of Tiahuanaco in Bolivia.

Classic Tiahuanaco. A term for the developed Tiahuanaco style at the site of Tiahuanaco and elsewhere in Bolivia.

Tiahuanaco-I. Stylistic division of Tiahuanaco.

Tiahuanaco-II. Alternative term for Classic Tiahuanaco.

Derived Tiahuanaco. A style closely related to the Classic Tiahuanaco but with a wider distribution in Bolivia and perhaps elsewhere.

Chiripa. A yellow-on-red style found isolated at sites around Lake Titicaca. Once thought to be post-Classic Tiahuanaco, its position is now uncertain. Distantly related to Pucara.

Pucara (*Pukara*). A style and a period found in the Southern Highlands of Perú at a site of the same name, near Juliaca. Related to Chiripa and Tiahuanaco and, according to some authorities, to Chavín as well.

Cochabamba. A style related to Tiahuanaco in the Eastern Cordillera of Bolivia.

Arani-I, II, III. Styles related to Tiahuanaco in the Eastern Cordillera of Bolivia.

3. Middle Periods:

Coast Tiahuanaco. General term for Tiahuanaco-influenced styles on the Coast of Perú.

Coast Tiahuanaco-A. Stylistic division of Coast Tiahuanaco, in general including materials with definite Tiahuanaco affiliations.

Coast Tiahuanaco-B. A term for local Coast materials of the Black-white-red Geometric style, derived from Coast Tiahuanaco-A.

Epigonal (*Epigone*). Alternative term for Coast Tiahuanaco, particularly Coast Tiahuanaco-A.

Tiahuanaco. A term, previously mentioned, used by some as an alternative for Coast Tiahuanaco. Used by others to designate Coast pieces in more or less "pure" Highland Tiahuanaco style.

Andino. Alternative term for Coast Tiahuanaco.

Andino del Sur. The Coast Tiahuanaco style on the South Coast.

Andino del Centro. The Coast Tiahuanaco style on the Central Coast.

Andino del Norte. The Coast Tiahuanaco style on the North Coast.

Tiahuanacoid. Term used to indicate Tiahuanaco design influence.

Chuquibamba. A Tiahuanacoid style near Arequipa.

Nazca-Y. A stylistic division of Nazca with some Tiahuanaco influence.

Pacheco. A particularly excellent Coast Tiahuanaco-A style found in the Nazca region.

Early Ica. Coast Tiahuanaco-influenced material in Ica Valley.

Ica Epigonal. Alternative term for Early Ica.

Kollawa. Alternative term for Epigonal, especially on the South Coast.

Middle Ica. A Middle Period on the South Coast, derived in part from Coast Tiahuanaco, but still a distinct style.

Middle Ica-I. Stylistic division of Middle Ica.

Middle Ica-II. Stylistic division of Middle Ica, corresponding in part to the Coast Tiahuanaco-B.

Middle Cañete. A Middle Period in Cañete Valley noteworthy for its absence of Coast Tiahuanaco influence.

Pachacamac. A term occasionally used to designate the Coast Tiahuanaco style at that site in the Lurin Valley.

Pachacamac-A. The relatively pure Tiahuanaco style pieces at Pachacamac, not isolated as a period.

Pachacamac-B. The Epigonal Period at Pachacamac, corresponding to Coast Tiahuanaco-A.

Pachacamac-C. The post-Epigonal Period at Pachacamac.

Pachacamac-D. The Black-white-red Geometric Period at Pachacamac, corresponding to Coast Tiahuanaco-B.

Middle Ancón-I. The Epigonal Period at Ancón, corresponding to Coast Tiahuanaco-A.

Red ware Incised. A style associated with Middle Ancón-I, not isolated as a period.

Middle Ancon I Incised. Alternative term for Redware Incised.

Late Ancón-I. The Black-white-red Geometric Period at Ancón, corresponding to Coast Tiahuanaco-B.

Middle Ancón-II. A transitional style between Middle Ancón-I and Late Ancón-I at Ancon.

Post-Epigone. Alternative term for Pachacamac-C. Similar to Middle Ancón II.

Three-color Geometric. Alternative term for Coast Tiahuanaco-B.

Black-white-red Geometric. Alternative term for Coast Tiahuanaco-B.

Middle Moche-II. The Coast Tiahuanaco phases in the Virú-Moche-Chicama region.

Middle Moche-IIA. Stylistic division of Middle Moche-II, corresponding to Coast Tiahuanaco-A.

Middle Moche-IIB. Term for a series of variant local styles in the Middle Moche-II.

Middle Moche-IIC. Stylistic division of Middle Moche-II, corresponding to Coast Tiahuanaco-B.

Supe Middle Period. The Coast Tiahuanaco styles in Supe Valley.

Huaca de la Cruz style. Alternative term for Middle Moche-IIC.

Taitacantín style. Alternative term for Middle Moche-IIC.

Cursive Modeled. A cursive painted and modeled style of the Middle Periods of the North Coast, found at Chanchan ruins.

Abigarrado. Alternative term for Cursive Modeled. Also term for any cursive style of painting.

Cursive Tripod. A shallow, painted tripod style of the Middle Periods of the North Coast, found at Chanchan and elsewhere.

Black-white-red Recuoid. A painted style with small figure modeling of the Middle Periods of the North Coast, found at Chanchan.

Red-and-white Chanchan. A stylistic variant of the Middle Periods of the North Coast at Chanchan.

Santa. A local variant, corresponding to the Coast Tiahuanaco-B, in the Santa Valley.

Pressed ware. A style of decorating vessels found associated with the Middle Periods on the North Coast.

Queneto. A style of mold-made figurines and trumpets, associated with the Middle Periods at Moche, and also found on the surface of Queneto ruin in Virú Valley.

Middle Chimu. A hypothetical period which should bridge the gap between the Mochica and Chimu Periods.

Wilkawain-Tiahuanaco. A mixed style and period in the North Highlands, isolated near the town of Huaraz.

Marañón. A cursive painted, tripod style in the Middle Periods of the North Highlands.

Middle Huamachuco. A style at Huamachuco in the North Highlands, apparently related to Marañón style.

Cajamarca. Alternative term for Marañón.

Decadent Tiahuanaco. A post-Classic Tiahuanaco style in the South Highlands and in Bolivia.

4A. Late Periods, South Coast:

Ica. Standard term for late style on the South Coast.

Late Nazca. Alternative term for Ica.

Ica-I (*Late Ica-I*). Stylistic division of Ica.

Ica-II (*Late Ica-II*). Stylistic division of Ica with *Inca* influence.

Chincha. Term for Ica style in Chincha Valley.

Late Chincha-I. Stylistic division of Chincha.

Late Chincha-II. Stylistic division of Chincha.

Rukana. Alternative term for Ica.

Chukurpa. A variant on Late Chincha-I(?).

Late Cañete. Term for Ica style in Cañete Valley.

Chincha-Atacameño. Term for a late style thought by some authorities to have a wide distribution in southern Perú and Chile.

Churajón. The Atacameño style at Arequipa.

4B. Late Periods, Central Coast:

Chancay Black-on-white. Standard term for a late style on the Central Coast.

Sub-Chancay. Alternative term for Chancay Black-on-white.

Late Ancón-II The Chancay Black-on-white style at Ancón.

Huaylas-Yungas. Generic style probably corresponding in time to Chancay Black-on-white, in the Santa to Pativilca region.

4C. Late Periods, North Coast:

Chimu. Standard term for Late Periods on the North Coast.
Late Chimu. Alternative term for *Chimu.*
Blackware style. Alternative term for *Chimu.*
Late Moche. Alternative term for *Chimu.*
Late Moche-I. Stylistic division of *Chimu.*
Late Moche-II. Stylistic division of *Chimu,* with *Inca* influence.
Tallan. Variant on *Chimu* in far North Coast valleys.
Paddle-marked. A decoration style in *Chimu.*

4D. Late Periods, Highlands:

Chullpa. Term for miscellaneous late material in South Highlands and Bolivia.
Late Huamachuco. Slightly pre-*Inca* style in the North Highlands.

5. Inca Periods:

Inca (*Incaic*). Standard term for classical *Inca* style materials.
San Jerónimo. Variant *Inca* style in the North Highlands.
Early Inca. A subdivision of *Inca* style at Cuzco, isolated as a period.
Late Inca. A subdivision of *Inca* style at Cuzco, isolated as a period.
Viracochapampa. *Inca* style at Huamachuco in the North Highlands.
La Paya-Inca. A mixed *Inca* style in the Eastern Cordillera of Bolivia, Northwest Argentina, and North Chile.
Chanapata. A recently discovered pre-*Inca* style at Cuzco. The chronological position is still unknown, but it probably corresponds to the Early Periods elsewhere.

THE ARCHEOLOGICAL PERIODS

In the pages which follow, the major archeological periods and styles of the Perú-Bolivia region are described. These accounts are based on the work of many archeologists and the principal sources have already been cited. The treatment is in general from an archeological point of view, although wherever possible, suggestions are made about the life and customs of the time. Such interpretations can never be considered accurate in the sense of contemporary ethnological studies. Much depends on the inconsistent factor of preservation. Likewise, some cultures stress realistic design and others do not, which makes interpretation haphazard.

The sequence of description follows the order of the chart, from early to late. Thus the Chavín Periods are first, followed by the Early, Middle, Late, and *Inca* Periods. Within a period a geographic order is followed in terms of the major divisions of South, Central, and North Coast, North and South Highlands. The Central Highlands are dealt with separately. The accounts stress the accepted evidence. Some disputed points are indicated, but if the evidence is too debatable it is omitted altogether. Only brief mention is made of specialized techniques, such as metallurgy and weaving, since these subjects are treated in detail elsewhere. As a rule, the

CHART OF PERÚ-BOLIVIA ARCHEOLOGICAL PERIODS[1]

Year (*A. D.*)	*Period*	*South Coast* (Nazca, Ica)	*Central Coast* (Lurin, Rimac, Ancón, Chancay)	*North Coast* (Virú, Moche, Chicama)	*North Highlands* (Chavín, Callejón de Huaylas.)	*Central Highlands* (Cuzco)	*South Highlands* (Puno, Tiahuanaco)
1532	Spanish Conquest						
1500	*INCA* PERIODS	*INCA*	*INCA*	*INCA*	*INCA*	LATE *INCA*	*INCA*.
1400 1300	LATE PERIODS	ICA-II ICA-I	CHANCAY BLACK-ON-WHITE (Late Ancón-II).	CHIMU-II CHIMU-I	Late Huamachuco LATE	EARLY *INCA*	Chullpa.
1200 1100	Coast Tiahuanaco-B.	MIDDLE ICA-II (Bl-W-R).	BLACK-WHITE-RED (Late Ancón-I).	BLACK-WHITE-RED (Taitacantín).	BLACK-WHITE-RED.		DECADENT TIAHUANACO.
1000	MIDDLE PERIODS.	MIDDLE ICA-I	MIDDLE ANCÓN-II.	Pressed Ware Cursive. Bl-W-R Recuoid Queneto.	MIDDLE HUAMACHUCO (Marañón).		Cochabamba Arani.
900	Coast Tiahuanaco-A.	Pacheco EARLY ICA (Epigonal).	EPIGONAL (Middle Ancón-I).	EPIGONAL	WILKAWAIN-TIAHUANACO (Epigonal).		DERIVED TIAHUANACO.
		NAZCA-B	EARLY LIMA Negative	GALLINAZO		CHANAPATA (?)	CLASSIC TIAHUANACO.
800 700	EARLY PERIODS.	NAZCA-X PARACAS NECROPOLIS.	INTERLOCKING Intermediate	MOCHICA-II	RECUAY		PUCARA CHIRIPA.
		NAZCA-A	WHITE-ON-RED	MOCHICA-I SALINAR	WHITE-ON-RED		EARLY TIAHUANACO.
600 500 400	CHAVÍN PERIODS.	PARACAS CAVERNAS.	COAST CHAVÍN	COAST CHAVÍN (Cupisnique).	CHAVÍN		

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[1] Capital letters are major periods; small letters, styles not isolated by periods; parentheses, alternate names.

period terminology corresponds to that used on the chart. Some alternative terms are mentioned, and others are listed in the preceding glossary of period terminology.

THE CHAVÍN PERIODS

For years the pan-Peruvian Tiahuanaco style has served as the fulcrum for dividing Early from Late Periods in the Andean region. The style called Chavín was well known from examples of stone sculpture at the ruins of the same name, but insufficient work had been done to allow it to be placed accurately in the chronological scheme. When it was so placed, it was usually considered to be another manifestation of the Tiahuanaco style. Consequently, outstanding styles like Mochica and Nazca were designated as the earliest yet found on the Coast.

Since 1936, numerous discoveries of materials either belonging to the Chavín Period or strongly influenced by the Chavín style have been made. Although much work remains to be done, the present status is this: that wherever Chavín is found it occupies a position relatively older than other materials of the same region. Whether this dominant Chavín style represents a unit time period is still unknown. Subdivisions may ultimately be established. It may be shown that Chavín persisted in certain regions long after it had disappeared in others. In some of the best-known areas, the upper time limit is relatively well known. For example, on the North Coast there are a few vessels which show definite Chavín-influenced designs, although belonging to the Mochica Period. A similar mixture is found at the Early Period site of Paracas on the South Coast. However, it is quite clear that the Mochica and Nazca Periods are not the direct outgrowth of the Chavín style, nor are they, in their true florescence, particularly influenced by it. Since the periods which follow the Mochica and the Nazca are reasonably well established, the Chavín style must have disappeared at a comparatively early date in these regions.

Chavín materials are found in the North Highlands and on the Coast of Perú. Highland Chavín and Coastal Chavín show a number of basic differences which are not explained by the environmental contrasts in the two regions or by factors of preservation. The term Chavín refers to the type site at Chavín de Huántar, to the style, and to the period. The Highland site is still the most elaborate known manifestation of Chavín and is described first. However, there is no conclusive evidence that the site of Chavín is necessarily the center of origin and distribution of the style or the period.

THE CHAVÍN SITE

The site of Chavín de Huántar is located in the North Highlands of Perú, east of the Cordillera Blanca on a small tributary of the

Marañón River. Although at a respectable altitude, lush vegetation grows in the protection of the deep canyon. A fair amount of farm land is available on the river flats, but it is unlikely that this region ever supported a very large population. In the past, as today, the population must have been clustered in the small pockets where agriculture is possible. In spite of the limitations of the locale, the ruins are impressive, even though badly crumbled in many places. No large-scale excavations have been carried out, although some sample pits have been dug.

The ruins cover a large area. Three constructional units, totaling about 490 feet (150 m.) in length, flank the western side of the group. A large building at the south, called the Castillo, is connected by a terreplein to a mound or building at the north on which stands a modern chapel. The Castillo measures roughly 245 feet (75 m.) in length and 235 feet (72 m.) in width and is still about 45 feet (13 m.) high at the southeast corner (pl. 7, *top*). Outer walls slope slightly inward and are set back in terraces near the top. The total effect, however, is that of a mass platform and not a stepped pyramid. Within the Castillo are three floors composed of an intricate system of stone-lined and covered galleries and rooms. Ramps and stairways connect one floor with another. Throughout the building is a system of ventilation shafts which still furnish fresh air even in the lowest interior rooms.

The Castillo is all artificially constructed. It must have been built up floor by floor, with the arrangement of rooms, galleries, and vents carefully planned in advance. Once the interior enclosure walls were built and the flat covering slabs were in place, the space between the galleries and rooms was filled with rubble. Then the outer walls were faced with carefully dressed stones. At the southwest corner, carved stone heads on tenons are still on position. Above these are segments of a projecting cornice with carved design (fig. 1). Presumably the inset heads and the cornice once continued around the whole building (pl. 17). A carved stone pillar, called the "Lanzon," is still in its original position in one of the galleries of the terreplein.

The Castillo is the principal building at the Chavín ruins. To the east is a wide terrace faced with stone. Between this terrace and the river, which flows on the eastern edge of the ruins, is a flat area containing a sunken plaza 157 feet (48 m.) square. The plaza is flanked on the north and south sides by high platforms. The river has cut away part of the south platform, revealing a few gallery openings, much rubble fill, and the rough stone facings. Other constructions in the area are of minor importance.

The site of Chavín does not seem to represent a village. The interior galleries and small rooms of the Castillo would make poor living quarters and but few habitation sites have been found nearby. Likewise, the site is not a fortress since none of the buildings is constructed for defense. Instead, as many archeologists have suggested, Chavín was probably a religious center. The main buildings are laid out in accordance with a roughly conceived plan. The central sunken plaza has large platforms along its north and south sides, and is backed on the west by a raised terrace and the Castillo. The other mounds and units do not, however, fit into this symmetrical arrangement.

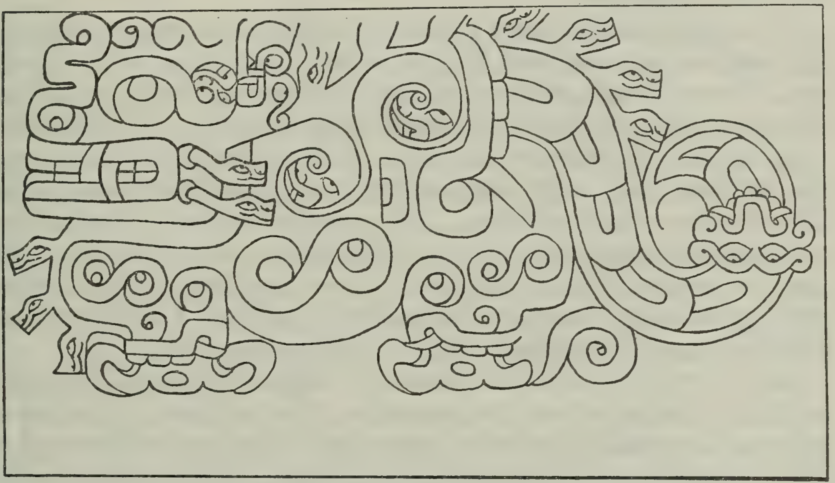

FIGURE 1.—A feline with curled tail, Chavín style. Taken from a cornice slab at the southwest corner of the Castillo at Chavín de Huántar. Champlevé and incised technique. (Traced in reverse.) (Redrawn from Bennett, 1942, fig. 1.)

The characteristic features of Chavín architecture and masonry can be summarized in a few points. (1) The buildings are essentially of the platform type. The effect of mass is presented by the unbroken walls and the absence of the exterior windows and doorways. (2) The masonry technique is one of alternating thick and thin horizontal rows of stone. Some outer walls are of dressed stone and the inner walls are of split stone, but both are built in the same horizontal-row technique. The dressed stones are well squared and smoothed but are not notched or jointed for fitting. Some foundation stones and the covering slabs for the galleries are large, but the greater part of the building is with smaller stone. Both sandstone and basalt are employed. (3) Interior galleries and rooms are typical of Chavín. The galleries are usually over 3 feet (1 m.) wide and about 6 feet (1.8 m.) high. The small rooms measure 7 feet (2 m.) in width and from 7 to 14 feet (2 to 4 m.) in length. The air vents are 16 by 18 inches (40 by 45 cm.). The galleries, rooms, and vents are laid out in a more or less symmetrical pattern. (4) Interior and exterior stairways are common. One set of monolithic steps is associated,

(5) Some house enclosure walls of well-dressed stone are located on the top of the Castillo, and along the edge of the river bank is a row of six small cells, lined and covered with stone. Neither the open houses nor the cells are sufficient in number to suggest a village dwelling pattern. (6) Small, subterranean canals are found in many parts of the construction, apparently for drainage purposes. Well-cut canal stones are also found about the ruins. (7) Stone sculpture is associated with the ruins.

The architectural complex found at Chavín site is unique. Some of the details occur elsewhere, but the total combination is found only here. Even though sections of the buildings are badly crumbled, there seems little doubt that they were once complete. In spite of the fact that the buildings are large and employ some good-sized stones, most of them could have been erected in a comparatively short time with properly organized labor. It is possible that the construction materials were assembled at the site by a large number of Indians, and that the actual building was left to a comparatively small number working under the direction of specialized masons. A similar system is still in vogue in Highland Perú for building churches.

Stone carving is a characteristic of Highland Chavín, including carving in the round and the decoration of flat surfaces. Carving in the round is virtually limited to human and feline heads with round or square tenons for wall insertion (pl. 17, *bottom*). True statues are not found. The sculptured heads represent old men with deep cuts in the cheeks and many wrinkles. The animal heads represent felines with projecting fangs and many curvilinear designs as face and hair decorations. Flat carved slabs include cornices and both wide and narrow stelae. There are two exceptions to these general categories: a large animal head without a tenon for wall insertion, and the carved Lanzon which is still in position in one of the galleries at Chavín. The Lanzon is a carved, prism-shaped stone, which has the rough appearance of a statue. However, the technique is essentially that of the flat-stone carving.

The flat carving is by incision and champlevé rather than high relief. The style is based almost exclusively on the feline concept in which the feline is represented by the head or by a head and profile body or by a zoomorphic front view. Appendages may be added to this basic feline figure which allow it to be identified as a condor, snake, or fish. Even the design detail is dominated by the feline element. Small design units frequently consist of the profile, front view, and top view of feline heads. There are a few geometric elements but even these seem to have been derived from parts of the feline figure. No other design style in all of Perú is so dominated by a single concept.

The style is basically curvilinear although frequently including some angular lines. Only exceptional pieces can be classified as angular in pattern. The design as a whole is highly stylized rather than realistic, but, in spite of the conventionalization, considerable variety of detail is achieved. In fact, stone carving at Chavín seems to reveal the individual artist restricted by convention in the range of design but with considerable freedom in the detailed expression thereof. This is a contrast to other Peruvian periods, where the individual artist is usually submerged in the universality of the pattern. Chavín stone carving is essentially limited to the immediate vicinity of the ruins, although the design style has a wide distribution.

Ceramic fragments are associated with the Chavín buildings but cemeteries or burials of this period have not yet been found there. Judging by the fragments, Chavín ceramics are comparatively simple and are predominantly of polished black, brown, or red ware. A few pieces employ both black and red colors separated by incised lines. The decoration is largely fine and wide-groove incision, low relief, rough scratch, punch, stamp, circles and dots, fine cross-hatch, appliqué, champlevé, and modeling. Some incised circles may be filled with red paint (figs. 2, 3).

The most common shape represented by the fragments is an open vessel with a flat or a rounded base. The rims vary considerably and include some which are very thick and some with inside or outside bulges. The open vessels have convex sides, slightly flaring sides, or slightly angular sides. Globular-body bowls with constricted straight collars or with flaring rims are also represented. Only a few fragments suggest the stirrup-spout vessel which is so common in the Coast Chavín Period. The majority of the decorated fragments have a simple, geometric design in which circles, triangles, squares, straight lines, cross-hatch, and curvilinear lines are the commonest elements. Only a few display the more elaborate design which characterizes the stone carving.

Chavín is represented at the type site by a distinctive architectural style, a stone-carving style, and a ceramic style. This combination has not been reported from any other Peruvian site. Although the Chavín style is presumably to be found at other sites in the North Highlands, insufficient evidence is at hand to discuss its distribution in that region. However, a number of Coast Chavín sites are known and will be discussed next, since the true antiquity of the period is demonstrated by these. Actually, there is little evidence at Chavín de Huántar of the chronological position of Chavín. The style is the earliest yet found at that site and is followed by a crude, White-on-red style, plus various late styles. These post-Chavín styles, however, do not suffice to place it chronologically.

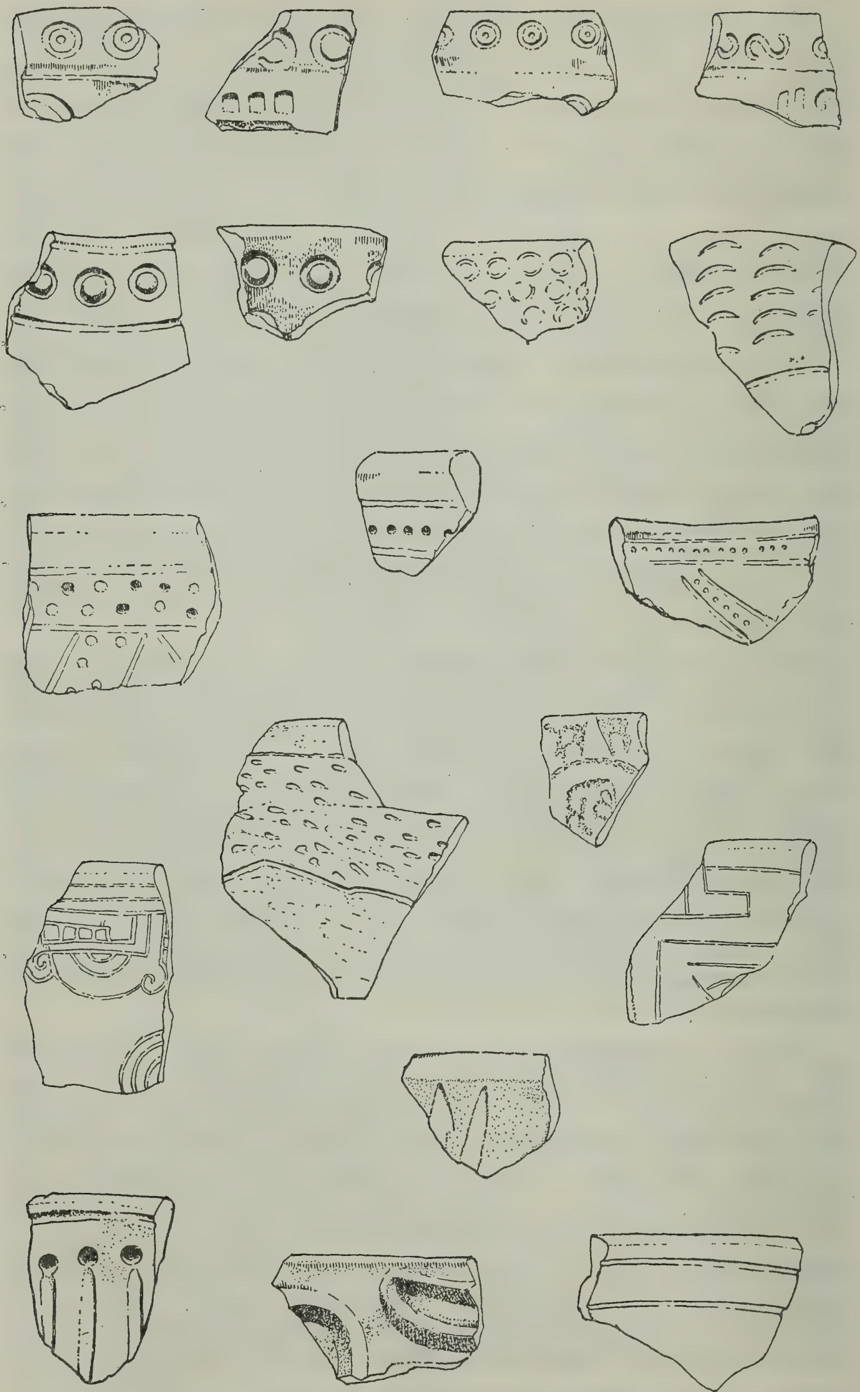

FIGURE 2.—Chavín style sherds from Chavín de Huántar. (After Bennett, 1944 b, fig. 29.)

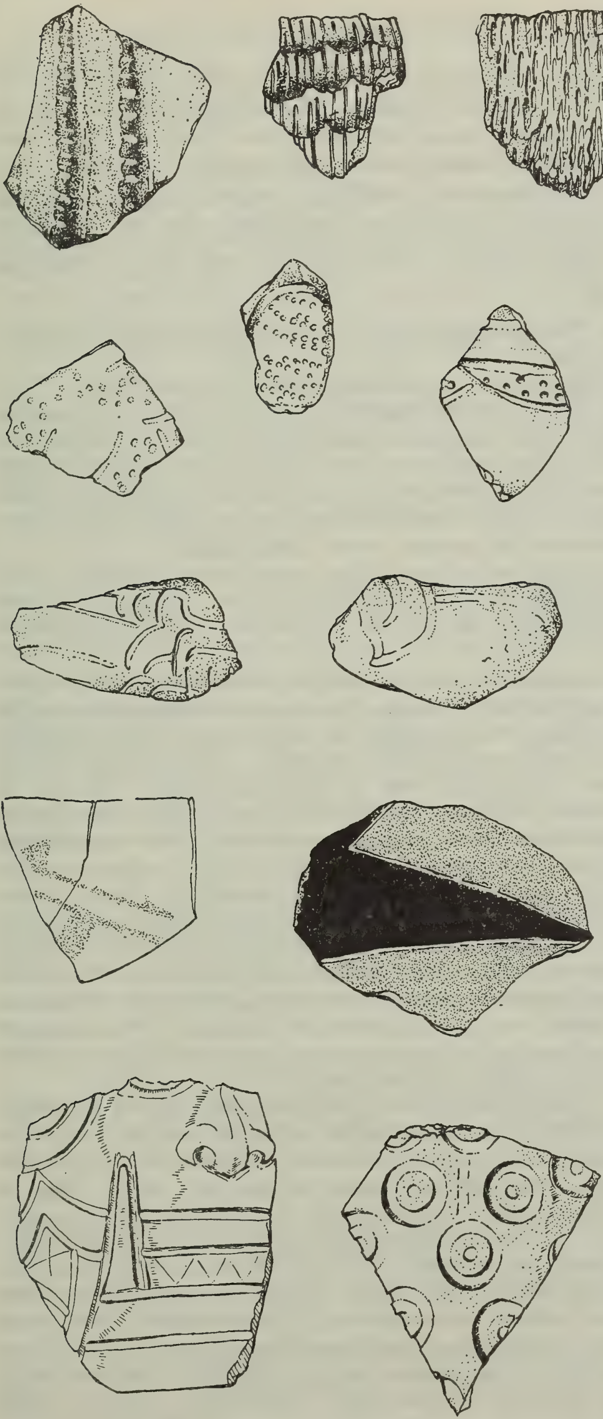

FIGURE 3.—Chavín style sherds from Chavín de Huántar. (After Bennett, 1944 b, fig. 30.)

COAST CHAVÍN

Chavín materials and influence are found in many sites from the South Coast to the North Coast of Perú. On the North Coast, Chavín is frequently called Cupisnique. It is not certain that all the Coast and Highland Chavín sites belong to a single period. However, until a sound basis for subdivisions is established, the materials from the Coast can be treated as a unit. In the following list the principal valleys and sites where Chavín type material has been discovered are briefly annotated.

(*1*) *Pisco Peninsula.* The Cavernas style at Paracas shows traces of Chavín influence in the ceramic design.

(*2*) *Rimac Valley.* Fragments of Chavín style pottery have been found.

(*3*) *Ancón.* Near the famous ancient cemetery of Ancón, a refuse site was discovered which contained pottery fragments amazingly similar to those found at the Chavín site itself. Recent excavations have shown that some of the fragments contain the type of design generally found on Chavín stone carving. Associated with the ceramics were stone mortars, pieces of deer antler, bone awls and netlike baskets. This material is generally called Early Ancón.

(*4*) *Puerto de Supe.* At the port of Supe Valley several sites have been found which contain ceramics similar to those of Highland Chavín. Burials and simple construction work are associated as well as baskets, nets, textiles, and other miscellaneous objects.

(*5*) *Casma Valley.* A number of sites have been discovered here which may ultimately be related to the Chavín Period. The one most clearly related at the moment is the site of Pallca, which consists of rough stone courts, pyramids, and platforms with long stairways up from the river. Coast Chavín pottery fragments are scattered about the ruins in great abundance. The site of Moxeque has conical adobe and rough stone walls covered with a clay plaster with carved relief design. Some of the design resembles the Chavín stone-carving style, but other designs are quite distinct. The site of Cerro Sechín may ultimately be associated with Chavín although this is still uncertain. The site is important because stone carving is associated with its construction—an unusual feature at a Coast ruin. The lower terrace of Cerro Sechín is faced with a series of upright slabs in between which are smaller blocks. The blocks are carved with low-relief heads, and the uprights have figures cut on them. The style of this stone carving is essentially distinct from that at Chavín de Huántar. The second terrace of this ruin has a wall made of conical adobes and decorated with a jaguar figure painted in black, red, and white on a rose base.

(*6*) *Nepeña Valley.* Two sites here show definite Coast Chavín affiliation. Cerro Blanco is a low building containing a clay platform in which is carved a Chavín-style feline head. Room walls in the same building are made of split stone and conical adobe. The walls are covered with a clay plaster which is carved and painted with typical Chavín designs. Punguri is a site composed largely of conical adobes. It has clay-plastered walls with carved Chavín designs. Rounded clay columns are a unique feature. On the central stairway sits a modeled and painted clay feline with crossed fangs. Underneath the stairway was a grave which contained a stone bowl incised with Chavín design. Black ware ceramics with curvilinear incised designs have been reported from this site. There were certain indications that a Mochica style overlay the Chavín-decorated building. It is possible that the valleys of Casma and Nepeña were a center of Coast Chavín style.

(*7*) *Virú Valley.* Chavín ceramics have been found in graves near the Hacienda of San Ildefonso.

(*8*) *Moche Valley.* At the site of Moche, typical Mochica Period graves contained a few vessels with Chavín-influenced designs.

(*9*) *Chicama Valley.* The sites of El Salinar, Palenque, and Santa Ana all contain Coast Chavín graves with ceramics, and bone, stone, and shell objects. The fact that these graves contain only Chavín materials, plus the fact that some graves are stratigraphically below Mochica burials, is important in demonstrating the antiquity of Chavín. In a dry quebrada off of Chicama Valley many Coast Chavín fragments have been found. The quebrada, and sometimes the style, is named Cupisnique (see Larco Hoyle, this volume, pp. 149–155).

(*10*) *Pacasmayo Valley.* Some Coast Chavín graves have been discovered here.

(*11*) *Lambayeque Valley.* At the site of Batan Grande, refuse materials which included fragments of Coast Chavín style were found stratigraphically under the Chimu Period. At the site of Chongoyape, two important graves were found with pottery of Coast Chavín style (pl. 18, *top*, *a*, *c*) and numerous gold objects with hammered relief in Chavín-design style. From an unknown locale in Lambayeque Valley, a carved shell with Chavín design was discovered.

(*12*) *Piura Valley.* A local collection contains one Coast Chavín vessel, presumably from this area.

The Coast Chavín sites present a variety of new materials not found in the Highlands. The evidence for the antiquity of Chavín has been mentioned in discussing the sites. Everything points to the fact that Chavín is older than any other known styles or periods on the Coast. The architectural remains associated with the Coast Chavín are quite different from those in the Highlands. The simplest constructions are rough lines of stone or rough stone circles. These are found at Puerto de Supe and at Cupisnique. In Nepeña are more elaborate buildings with platforms, stairways, and room enclosures made of rough stones and long, fluted, conical adobes. The walls are covered with a clay plaster which is frequently incised and painted. Round clay columns are associated. In Casma, Coast Chavín is associated with rough stone buildings, platforms, terraces, and steps. Still more elaborate buildings may someday be assigned to the Coast Chavín Period.

The Coast Chavín ceramics at Ancon and Puerto de Supe are amazingly similar in shape, color, and design to those found at the Highland Chavín site. Elsewhere, the Coast Chavín ceramics, although clearly related to Highland Chavín, are more elaborate (fig. 4). A typical vessel has a thick stirrup-spout with flattened rim edge. The ceramic design still includes the simpler incised geometric elements, but also copies the Chavín stone-carving style. In Chicama, fine-incised designs, deep-carved vessels, two-color vessels with the color areas. separated by incisions, and modeled wares are all characteristic. Roots, human figures, dogs, felines, monkeys, and lobsters are portrayed in the modeled vessels. Open bowls and collar jars are less frequently found.

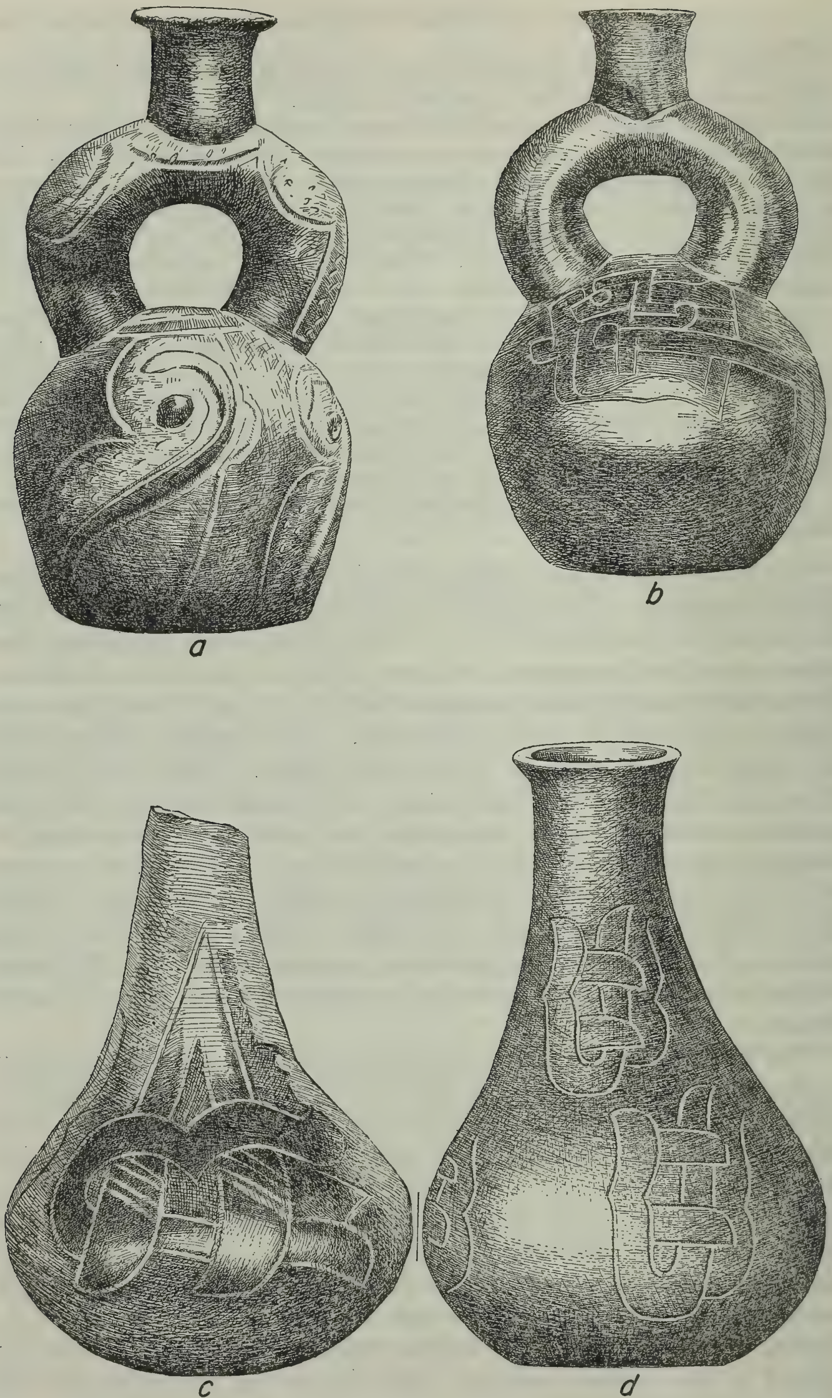

FIGURE 4.—Coast Chavín vessels. From the North Coast of Perú. (Redrawn from Tello, 1929, figs. 66, 63, 70, 69.)

At Puerto de Supe burials were rolled up in mats and interred in the sand. In Chicama Valley, graves are usually found in the rough talus slope and consist of circular, rough stone-lined tombs. Shaft-type graves, from about 30 to 80 inches (80 cm. to 2 m.) in depth, have also been found. The skeletons are both extended and flexed and are frequently covered with red paint. All are primary burials and the red paint covers the total area rather than only the bones. One or two vases and occasionally other artifacts are found with each burial.

Direct evidence of weaving is found at Puerto de Supe in the form of spindle whorls, cotton, some plain and some decorated cloth, a feather headdress, and bundles of hemp. Plain twine and netlike baskets are found at Puerto de Supe and Ancón; fish nets were found in some sites. Miscellaneous artifacts include awls; beads; spatulas, incised with Chavín designs (fig. 5); decorated and plain shells; plain and carved stone bowls; plain mortars; and a four-nobbed, ring club head.

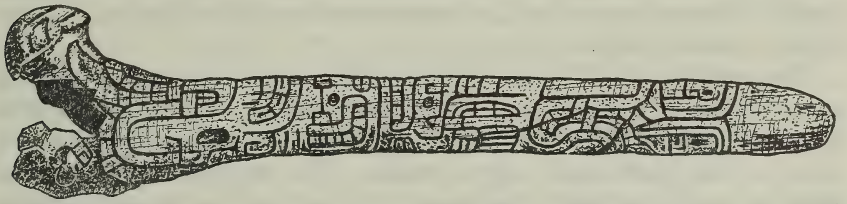

Figure 5.—Bone spatula, Chavín style. From the Chicama Valley. (Redrawn from Tello, 1943, pl. 24, *c*.)

No metals have been found at the Highland Chavín site, and only gold is found at the Coast sites. The gold is sometimes decorated in relief with designs of the Chavín stone-carving style (pl. 19, *bottom*). In many cases, the relief is achieved by pressure with a bone implement rather than by hammering. Welding and soldering were also known.

The original reports on the sites at Ancón and Puerto de Supe described them as shell heaps. However, finds of maize, yuca, beans, and various seeds show a knowledge of agriculture and change the original impression that these were essentially a fishing people.

The unity of Chavín is the dominant stone-carving design style. In the Highlands it is more limited to stone carving, but on the Coast it is found on ceramics, goldwork, stone bowls, bone implements, and shell artifacts. The chronological position of the Chavín Period as the earliest yet discovered in Perú does little to solve the problem of the ultimate origin of the higher civilization in this area. Chavín is a sophisticated and complete culture with a good knowledge of stone masonry, architecture, goldwork, weaving, stone carving, ceramics, and agriculture. There is some evidence of a reasonably well organized political organization, at least to the extent of being able to erect large buildings. A dominant religion, plus perhaps a religious organization, is implied by the conventionalization of design, altars, religious centers, and the ubiquitous feline concept.

EL SALINAR

At El Salinar (see Larco Hoyle, this volume, pp. 155–161), in Chicama Valley, a grave sequence has been found which places the Coast Chavín style as the oldest, followed by the Salinar style, and, finally, the Mochica style. Other graves of this Salinar type material have since been discovered. It is of interest because it seems to fill the wide stylistic gap between Coast Chavín and Mochica. The burials are extended and frequently covered with slabs arranged as an angular roofing. Pottery (pls. 66, 67) is of a distinct type including bottles with handles, stirrup-spout vessels, collar jars, and rather crude anthropomorphic and zoomorphic modeling. Although the ceramics show some relationship to the earlier Chavín, the design is gone. One tomb, however, contained a bone spatula with a typical Chavín design (pl. 68, *top*).

Also associated with some of the Salinar material are vessels with crude white-on-red designs. The white-on-red painting, in association with the modeling, is indicative of the later Mochica, in which this is the dominant characteristic. The white-on-red material likewise may eventually be shown to be related to the post-Chavín graves at the Highland Chavín site and to some of the Early Period material in the Chancay Valley. More evidence is needed to make this tie-up a certainty, since crude white-on-red pottery is not particularly distinctive. The true importance of El Salinar must await publication of the results of recent excavations.

THE EARLY PERIODS: SOUTH COAST

NAZCA

Nazca (Early Nazca, or Proto-Nazca) is an Early Period limited to the two South Coast valleys of Ica and Nazca. The South Coast valleys are not as well watered as those on the North Coast. Many of the rivers are semipermanent and others dry up before reaching the ocean. Nonetheless, the valleys are of large size. In pre-Spanish times, probably less water was drawn off for upstream plantations, so that the lower part of the valleys received a greater quantity. Most of the archeological sites, however, are up-valley. Great shell mounds, some up to 600 feet (180 m.) in length, 330 feet (100 m.) wide, and 130 to 160 feet (40 to 50 m.) high, are located in the lower valleys near the mouth. Nothing is known about the builders of these mounds nor of the time of their occupation of the South Coast.

The chronological position of Nazca as an Early Period between the Chavín and Tiahuanaco horizons is well established. At the upper limit Nazca and Coast Tiahuanaco merge; the related Early site of Paracas shows traces of Chavín influence. Nazca is best known for its ceramics and textiles, both of which are well preserved on the dry South Coast. On the other hand, little is known about Nazca architecture. No buildings have been positively identified with the Nazca Period, although some simple adobe terraces are associated. These are made of small balls of clay, some roughly shaped as hemispheres. Village sites are also unknown. In spite of the fact that textiles and ceramics have been found in considerable quantity, the general impression is that the Nazca Period was not abundantly populated or politically well organized. Instead, the picture seems to be one of small groups of reasonably prosperous and artistic farmers.

The Nazca culture developed with little outside influence for a fairly long time. At least stylistic changes can be noted in the ceramic shapes and designs. On the basis of these changes, Nazca materials have been divided into two major styles or subperiods, designated Nazca-A and Nazca-B. The transition style between these two subperiods has been designated Nazca-X. Finally, a later Nazca style, which incorporates certain Coast Tiahuanaco elements, is called Nazca-Y. These divisions will be mentioned in more detail in the discussion of ceramics.

Cemeteries have been found in the dry sands along the margins of the valleys. The graves, from 20 inches to 15 feet (50 cm. to 4½ m.) deep, can be roughly described as pot-shaped. Some have a round shaft with a squared chamber below and others have a square shaft and a round chamber. Some graves are lined with poles or with rough stones. The burials are flexed and cloth-wrapped. Many of the skulls show longitudinal deformation. The graves also contain ceramics and other mortuary objects.

Nazca ceramics can be distinguished from all other Peruvian periods by designs, colors, and shapes. The vessels are made by the coil technique but show great uniformity in shape and size. All vessels are highly polished and have the designs skillfully applied. Although some secondary use is made of decorative modeling, Nazca pottery is characterized by polychrome painting. In fact, plain wares do not occur in the grave collections. Red is the most common base color, but white, cream, gray, and buff are also used As many as 11 colors may be employed in the painted design. These include two shades each of red, yellow, and brown; and gray, flesh color, violet, black, and white. Designs are commonly outlined in black, and are frequently described as naturalistic since many can be roughly identified. However, Nazca painting is not pictorial, like the Mochica, and in general the term realistic does not apply. Among the typical designs are found figures representing birds, mice, llamas, bats, fish, rows of human heads, fruits, seeds, various anthropomorphic monsters, and quite a variety of geometric patterns.

The division of the period into Nazca-A and Nazca-B phases is based on the association of ceramic shapes and designs. Nazca-A vessels (pls. 24, *top;* 25, *a-c, f*) are principally variations of an open bowl or a cup shape and a double-spout jar. The double-spout vessel is bell-shaped with a rounded bottom; on top of this closed container are two short parallel spouts connected by a short flat bridge. The commonest shapes of the open vessel are a round-bottom bowl with plain rim, a cup bowl with rounded bottom and flaring rim, and a slightly deeper flaring bowl. Four-to six-color designs are common. In general, designs are naturalistic rather than conventionalized. Birds, plants, and fish are typical, as well as some more elaborate designs, including cat demons, centipedes, and a series of trophy heads. Frequent geometric designs are the step fret and step and block.

The Nazca-B (pl. 24, *third row*) specializes in variations on goblet and tall vase shapes. There are also bell-shaped vessels topped by a spout and a bridge to a modeled head, and variations of face or figure jars. In fact, modeling is essentially limited to the Nazca-B. The painting is still polychrome, employing some three to eight colors on a white or red background. Designs are more conventionalized and include a jagged-staffed demon, bands of heads, rows of figures, and some interlocking designs. The Nazca-X (pl. 24, *second row*) is clearly transitional between the two dominant styles except for a few bowl-shaped vessels with narrow mouths. Although these divisions of Nazca Period have not been confirmed by good stratigraphic evidence, they seem reasonably sound on a stylistic basis. It must be noted, however, that some authorities are inclined to place the Nazca-B style chronologically before the Nazca-A.

The textile art is highly developed in the Nazca Period. Both cotton and wool fibers are used in the weaving. The cotton was grown on the Coast but the wool was obtained from the llama, alpaca, and vicuña, all Highland animals. This suggests a system of Coast-Highland exchange of raw materials even in the Early Periods. The textiles present an amazing number of weaving techniques. The variety of colors indicates skill in dyeing. In her study of one Early Nazca collection, O'Neale (1939) identified 190 hues in 7 color ranges. Some of these may have resulted from fading, but many of them were obviously intentional since they vary in regular design sequences.

Embroidery is a characteristic decorative technique, either of the outline type for central figures or of the over-all type on borders. Tapestry technique is used for small-area decoration. Brocades, warp and weft stripes, gauze and lace are common. Needle knitting in three dimensions is also characteristic. The textile designs in general are like the ceramic designs, including the anthropomorphic curvilinear figures, birds, flowers, fishes, and some geometric patterns. Some painted textiles have designs resembling the Nazca-A style, but otherwise the subdivisions of the period have not yet been verified by textiles.

Gold is the only metal known for the Nazca Period. Metallurgical techniques are not elaborate, but gold was hammered and cutout in simple design. Flat gold pieces with incised design were used as mouth masks and as head ornaments as depicted in some ceramic designs.

In the ceramic and textile arts the Nazca craft standards were high. Although there might have been craft specialists, the pieces themselves cannot be identified as the work of any single individual. In other words, the individual artist was subordinate to the general high technical standards of the art. Although the quantity of materials indicates that numerous individuals must have been potters and weavers, apparently all of them were able to achieve the high standard.

PARACAS

The site of Paracas is located on the Pisco Peninsula in the barren sandy wastes around the hill called Cerro Colorado. The term Paracas is frequently used to refer to the culture as well as to the site. Actually, however, the Paracas site has two distinct although related cultures, namely, the Cavernas and the Necropolis.

The Cavernas culture is named after the type of cavern tomb cut out of the semihard rock on the slopes of Cerro Colorado. It is presumably older than the Necropolis although convincing evidence of this has not yet been published. The Cavernas tombs vary greatly in cross section, but in general consist of long tubular shafts which descend vertically from 10 to 13 feet (3 to 4 m.) and enter large globular chambers in which the multiple burials and the grave equipment are placed.

Cavernas pottery presents a unique style (pls. 20; 21, *d*, *e*). Open bowls, globular vessels with two spouts, and modeled fruits and anthropomorphic figures are the common shapes. Incised decoration is typical with the areas between the incised lines covered with bright-colored canary-yellow, green, red, and black paint. These colors are not well applied and frequently flake off. Some of the vessels are decorated in two-color negative painting. The designs are basically geometric, but some vessels have a feline pattern suggestive of Chavín influence. The Cavernas-style pottery has so far only been found at Paracas and at Ocucaje in Ica Valley.

Textiles are found in the caverns but are not of the same high quality as those in the Necropolis. A few gold objects are associated, but no copper or silver. Nets and gourds and baskets of totora reeds accompany the burials.

The Necropolis culture at Paracas is represented by subterranean houses made of small stones and hand-formed adobes. Some of the walls are from 12 to 15 inches (30 to 40 cm.) thick. In 1925, Tello (1929) extracted 429 mummy bundles from the wall-enclosed cemetery. These bundles are conical in form (pl. 21, *f*) and many are of large size, measuring 5 feet (1½ m.) high, by 5 feet (1½ m.) in diameter. The mummy bundles have furnished many textiles, some in an amazingly good state of preservation. The mummies were probably artificially prepared before wrapping, at least to the extent of removing the inner body organs, and then naturally desiccated by the hot cemetery sands. Many of the skulls are trephined. A great variety of objects accompany the burials, including stone axes, parrots, monkeys, llama bones, meat, wool, beans, maize, cotton, and peanuts. Small gold ornaments are attached to the bundles (pl. 19, *top*). Many of the bundles show various stages of wrapping. In one, four distinct stages could be determined, implying that the wrapping had been done on as many different occasions. Besides the plain canvaslike cloth, there are also large decorated mantles, poncholike shirts, skirts, breechclouts, and turbans. Many of these were woven specifically for burial purposes, since they show no sign of wear and were made to fit the padded bundle rather than the deceased individual.

The Necropolis ceraimcs (pl. 21, *a-c*) are, for the most part, simple, with a white flaky finish. Their shapes suggest Nazca, but their lack of decoration is in great contrast to the latter.

The textile art presents an amazing number of techniques, but the over-all embroidery is outstanding (pl. 22). Borders on ponchos and mantles are completely covered by polychrome stitching and large-unit elements decorate the central areas. The designs are closely related to the ceramic decoration of the Nazca Period, including the same elaborate anthropomorphic figures.

Presumably, the Cavernas culture of Paracas is older than the Necropolis, which in turn bears a definite resemblance to Nazca. Authorities are not agreed on the interpretation of the resemblances and differences and the chronological sequence of these three cultures. Some argue for a succession of Cavernas, Necropolis, and Nazca. Others feel that the Necropolis textile artists copied the Nazca painted designs, implying contemporaneity for at least these two cultures. The problem cannot be settled on the basis of present published evidence.

THE EARLY PERIODS: CENTRAL COAST

It has already been mentioned that the Chavín horizon represents the earliest material yet found on the Central Coast of Perú. Until recently, little attention had been paid by archeologists to materials which might be classified as Early Central Coast, corresponding in time with the Mochica on the North Coast and Nazca on the South Coast. The neglect was caused in part by the fact that elaborate remains and outstanding styles had not been encountered, and in part by the fact that the Early Periods were obscured by the abundance of the Tiahuanaco Middle Period styles on the Central Coast. It has now been demonstrated that two styles are definitely assignable to the Early Central Coast Period, and a third one possibly so. These three, in chronological order are: the White-on-red style, the Interlocking style, and the Early Lima style.

WHITE-ON-RED

The White-on-red style is best established in Chancay Valley at the sites of Cerro de Trinidad and Baños de Boza. At the first site the White-on-red style is stratigraphically older than the Interlocking, and both are demonstrably older than the Tiahuanaco Middle Periods. The White-on-red ceramic style is so named because of the characteristic crude white painting on a red-ware base (pl. 27, *b-e*, *g*). Bowls with flaring lips and horizontal handles and mammiform jars are the most typical shapes. Also common are jars with wide or narrow mouths, and cylindrical or flaring-sided cups. The decorated pieces, both fine and coarse, can be divided into two categories, a white-painted (pl. 26, *a*, *b*) and a white-zoned (pl. 26, *c*, *d*). In the white-painted group, the vessels have crudely executed, simple designs of circles, dots, rectangles, cross-hatch, horizontal, and vertical lines, semicircles, triangles, and broken lines. The white-zoned group includes vessels either completely covered with a white slip, or with large areas so covered. Plain red, red-on-white, and two-color negative ware are less common types.

Architectural remains of platforms and walls made of hemispherical-shaped adobes are associated with this period. Shallow graves in the dry sand contain flexed burials covered with poles. Some graves are covered by a rough stone vault. Nonceramic grave goods are not numerous but include clay figurines, spindle whorls of stone or clay, fragments of wooden objects, some plain cloth, shell beads, and a mask of a gold-copper alloy.

It is difficult to trace distribution of the White-on-red style because of its simplicity. Some have compared it with Middle Supe and Middle Ancón-II, but the relationship, if any, remains obscure. A few White-on-red fragments have been found at Pachacamac in the oldest level of the Interlocking Period. Outside of the Central Coast area, some materials have been found which may ultimately correlate with this Chancay style. The White-on-red style found at El Salinar in Chicama Valley has already been mentioned (p. 92). Near Huaraz in the North Highlands, an isolated grave contained 15 pieces decorated with simple designs painted in white on a red base. The shapes of these vessels, however, were variants of a flaring-sided cup, and one double bowl was also included. Finally, at Chavín de Huántar in the North Highlands, graves intrusive into the Chavín Period level contained crude White-on-red vessels. Although all of these materials may not be contemporaneous, the picture is consistent in placing the White-on-red style in a position following the Chavín horizon.

INTERLOCKING

At one time, the more elaborate Interlocking style was thought to precede the White-on-red. The reverse situation has now been demonstrated by careful stratigraphy. At the site of Cerro de Trinidad in the Chancay Valley, a long stratigraphic sequence shows an early White-on-red style being gradually replaced by the Interlocking style. In several other sites, it has been demonstrated that the Interlocking style precedes the Coast Tiahuanaco Middle Periods.

The Interlocking ceramic style (pls. 26, *f*, *g*; 27, *a*; 28, *a*-*c*) is so named because of the predominance of a textile-derived interlocking fish design. Other ceramic design elements are also used either alone or in combination with this interlocking fish. These include chevrons, circles, dots, crosses, cross-hatch, steps, and serrations. The designs are usually painted in either black and white, or black, white, and bright red on a reddish base. At Pachacamac, a two-color negative ware is added, and crude red and polished black wares are sometimes found. The principal shape is a beaker with out-flaring or out-slanting sides, and large mammiform jars are also common. Double-spout vessels, constricted-collar jars, spout and handle jars, and some modeled vessels are associated with the Interlocking style at some sites. Besides vessels, clay adornos, figurines, whorls, and panpipes are found.

The construction walls in the Interlocking Period are thick and made of adobe or stone. The adobes are hand-molded into crude dome shapes. At Chancay, one wall has a fresco of interlocking fish painted in white, yellow, red, and black.

The origin and ultimate affiliations of the Interlocking style are still imperfectly known. At Pachacamac, it represents the earliest materials as yet found. The interlocking fish design element is found in many styles, such as the Nazca-B and the Early Lima, and a somewhat similar style occurs in the Highlands.

EARLY LIMA

Although the White-on-red and the Interlocking styles can be definitely assigned to the Early Periods on the Central Coast, the evidence for so placing the Early Lima style is much weaker. The type site for Early Lima is Nievería in the Rimac Valley. The collections from this site are mixed, and there is little excavation information (pls. 28, *d-g*; 29). Consequently, in an analysis the emphasis is placed on the component strains or styles. These include strains which have been thought of as related to the Nazca-Y style, the Mochica, the Interlocking, and the Coast Tiahuanaco. Some authorities are inclined to place all Early Lima in the Coast Tiahuanaco Middle Periods. Others feel that some of the design strains represent a slightly earlier phase. This is logical, and the presence of some Interlocking pieces is significant, but, on the whole, the evidence for an Early Lima Period in a pre-Coast Tiahuanaco position has as yet to be confirmed.

THE EARLY PERIODS: NORTH COAST

MOCHICA

The Mochica (Early Chimu, Proto-Chimu) Period (see Larco Hoyle, this volume, pp. 161–175.)was once considered to be the earliest on the North Coast. Recent stratigraphic studies have now shown that Mochica was preceded by the Chavín horizon, and there is some evidence that the little-known El Salinar style is also earlier.

In general, Mochica is marked by its unity of style. Detailed studies show certain outside influences, but these are absorbed and molded into the dominant style and in no sense interrupt the basic trend. The quantity of Mochica ceramics suggests a relatively long time period, but in spite of this the various attempts to subdivide the mass of material into a Mochica-I and a Mochica-II style have been far from satisfactory and have still to be confirmed by direct evidence.

The Mochica as a whole represents a complete and highly developed culture. Architectural remains are of good quality, although not of great complexity. The ceramics are excellent and, through detail in their pictorial design, suggest an advanced social and political organization. Weaving and metallurgy were skilled crafts. Extensive irrigation projects were undertaken. Although the population must have been reasonably large, as judged by the amount of material, and well organized, as indicated by the size of the constructions, it does not seem to have been too pressing. Remains of large villages have not been discovered, and most of the ruins are situated in the more favorable parts of the valleys. Furthermore, the large and fertile valleys immediately to the north were apparently unoccupied by the Mochica peoples, which would imply lack of great population pressure.

Battle scenes are frequent in the ceramics, and considerable attention is paid to figures of warriors and arms. Apparently, these depict local conflicts, since the archeological evidence does not confirm contacts with markedly different cultures. Instead, the flowering of the Mochica Period seems to have gradually died down until the cultures which followed were able to replace it rather than merge.

For example, in such Central valleys as Virú and Moche, both the Gallinazo and the Coast Tiahuanaco cultures replace Mochica with but few indications of mixture or influence from the early style.

The Mochica Period is best represented in the North Coast valleys of Chicama, Moche, and Virú. To the south, the valleys of Santa, Chimbote, Nepeña, and Casma were occupied, but the excavated materials are usually of a poorer quality. In the north, only the Pacasmayo Valley shows evidence of Mochica occupation, while such important valleys as Lambayeque and Piura have yet to furnish evidence of the period.

There is no recognized type site for the Mochica Period, but the ruins of Moche, not far from the town of Trujillo, serve as an excellent example of the architecture of the period. Between the peak called Cerro Blanco and the flood plain of the Moche River, two principal adobe structures are located. The first, named the Huaca de la Luna, is at the base of Cerro Blanco, and the second, the Huaca del Sol (pl. 32), is some 546 yards (500 m.) to the west, at the very edge of the Moche flood plain. There is some evidence of a village site on the flats between these two structures.

The Huaca de la Luna consists of a large terraced platform 260 by 195 feet (80 by 60 m.) and about 70 feet (21 m.) high. Along the front and south sides are 6 step terraces between 10 and 12 feet (3 and 4 m.) high and 7 feet (2 m.) wide.

The Huaca del Sol is probably the largest single structure on the Coast of Perú. It consists of a base platform 750 by 450 feet (228 by 136 m.) and 60 feet (18 m.) high. The sides are built up in 5 stepped terraces, and a causeway about 20 feet (6 m.) wide and 290 feet (90 m.) long leads to the open north end. On the south section of the platform is a pyramid, 340 feet (103 m.) square and 75 feet (23 m.) high, with 7 step terraces on its side. The whole structure is composed of one solid mass of rectangular adobes, built up in a series of high and thick juxtaposed walls and columns. The masonry is good but it is not complex. The technique of retaining wall and fill is not used, and the adobe bricks are not coursed although some of them are laid crosswise and others lengthwise. It has been suggested that these big piles were built by population masses working communally rather than by professional architects.

The identification of the Huaca de la Luna with the Early Period is based on the discovery of graves under some of its terraces, and also on its frescos, which have designs of typical Mochica style. The painting is done in black, white, red, yellow, light blue, pink, and brown. There are traces of fresco painting at other sites too, and also walls decorated with relief clay arabesques.

Isolated pyramids are the characteristic construction of the Mochica Period. Many have narrow terraces along the sides; some are approached by a ramp; some are high, others low; some, like the Huaca del Sol, have a platform and a superimposed pyramid. Many are built on the open plains, although some cap projecting ridges and spurs. Building is done with adobe brick, supplemented in some cases with rough stones and algarrobo logs. The typical adobes are mold-made rectangular blocks. Parallel grooves on the edges of some suggest the use of cane or reed molds. Rounded top and hemispherical adobes may possibly be associated with Mochica style, too.

Mochica cemeteries have been found on the platforms of the pyramids, at the base of the pyramids, and on the sandy stretches along the ocean or at the margins of the valleys. Typical graves are rectangular boxes, lined and covered with adobe brick. Some have niches built into the side walls. Other graves lack the adobe lining, or have rough stones around the edges. In one case, a child burial was found in a large vessel. The graves contain one or more skeletons, extended on their backs, as well as a large accompaniment of ceramics and other artifacts.

One of the outstanding achievements of the Mochica culture is represented by the ceramic art (pls. 30, 31). Fragments of cooking vessels and other utilitarian wares are found in the house refuse. Thousands of ceramic vessels, however, were made for ceremonial purposes or for grave offerings. These vessels form the bulk of museum collections and characterize the period. Utilitarian ware and some of the simpler forms of grave pottery were made by the coil technique. However, many of the finest examples of the grave ceramics were made in molds, fragments of which have been found. In spite of the use of molds, very little duplication is found.

Some plain red, orange, and black ware vessels are known, but decoration by painting, relief, and modeling is more typical. White and red are the characteristic colors, with black a less frequent addition. The painted design is skillfully applied and the vessels are usually polished. In fact, great skill is shown in all types of decoration.

The stirrup-spout is probably the most outstanding characteristic of Mochica ceramics, since it is found on roughly 50 percent of the ceremonial vessels. The stirrup-spout consists of two arched tubes which meet in a single cylindrical spout. Arched tubes and spout are of consistent thickness and well rounded. The most common category of vessel shapes is the container with a stirrup-spout. The basic container form is globular with a flat base, but numerous shape variations are found, including angular bodies, squat bodies, cylinder shapes, cup-cake shapes, and box shapes. In a common subcategory, the container has a modeled head or small figure on the top of it which serves as the base for one tube of the stirrup-spout. Finally, stirrup-spouts are typically found on modeled containers which represent portrait heads, complete figures, animals, birds, frogs, houses, mountains, and various types of fruits and plants.

Another frequent shape is a container with a straight cylindrical spout and a curved hollow handle from the spout to the body. Some vessels are globular with constricted flaring collars, on which modeled or painted faces may be depicted. Double bowls are not very numerous. One standard shape resembles a flower vase from a constricted, circular, flat base the sides flare out to form a large and graceful vessel. The dipper bowl, with a long, conical side handle, is equally characteristic of Mochica. Although the number of shape categories in Mochica ceramics is limited, considerable variety is achieved by the painted and modeled and relief designs.

Mochica ceramic design is basically realistic, so that a detailed study reveals many details of the life of the time. Geometric designs are not lacking, however, and include the scroll, the spiral band, a step-and-scroll combination, an angular scroll, lines, bands, stars, dots, circles, triangles, and the like. In their ceramic decoration, the Mochica people portray the life around them. The flora and fauna are faithfully represented. The human head is so faithfully modeled and so individualistic that such vessels are properly called portrait jars. The painting, relief, and modeling also portray scenes of such common activities as fishing, weaving, and warfare. Even evidence of sexual psychology is portrayed in the erotic pottery. In fact, the Mochica ceramics are in one sense a picture book of the culture.

Cloth is rarely preserved on the North Coast because of the considerable saltpeter content of the sands. However, incised clay spindle whorls are common and the ceramic decoration portrays cloth garments. One famous vessel shows female weavers working under the direction of a supervisor. Judging by this indirect evidence, the standard male costume seems to have been a wide, decorated breechclout held in position by a belt, a shirt with sleeves, and a rectangular mantle which was draped over the shoulders. Wide collar bands are depicted, as well as a variety of turbanlike headdresses which suggest clan or social-rank distinctions.

The wealth of archeological materials furnishes a basis for a general picture of Mochica culture. Subsistence was basically agricultural. There is direct evidence of large-scale irrigation projects and of cultivation with a hoe. The modeled pottery, and in some cases the preserved plants themselves, prove that maize, manioc, potatoes, sweet potatoes, calabash, squash, pumpkins, and peanuts were all cultivated. Many fruits were utilized, such as pepino, pacae, lúcuma, and several varieties of cactus. In ceramics, both the fruits and the plants are represented in anthropomorphic form, suggesting the association of magical or religious practices. A "Maize Goddess" is particularly conspicuous.

Fishing also seems to have been an important part of the subsistence, in spite of the fact that water transportation was but slightly developed. Reed balsas and simple rafts are the major watercraft and were propelled by paddles or pulled by swimmers. At least 16 different fish are illustrated, including the ray, pejerrey, bonito, sardine, flying fish, and corbina, as well as other forms of marine life, such as clams, shrimps, lobsters, crabs, shellfish, and squids. Sea lions were hunted on the rocky promontories.

Hunting was not uncommon, although in general it seems to have been a sport rather than part of the basic subsistence. Larco Hoyle (1938–39) has been able to identify 16 animals, including deer, pumas, dogs, sea lions, llamas, monkeys, bears, foxes, and otter, as well as 35 birds, such as ducks, owls, buzzards, condors, hawks, pelicans, and herons. Nets, spears, spear throwers, clubs, and darts were all used in hunting. In summary, agriculture and fishing seem to have been the basic subsistence, with gathering and hunting secondary.

The dwellings, according to the modeled pottery, were small rectangular houses with pent or gabled roofs—a peculiar style for a region noted for absence of direct rainfall. Walls and roofs were painted and adorned with frets. The adobe foundations of such small-unit houses, arranged on irregular terraces around the slopes of hills, have been uncovered in the excavations.

By direct and indirect evidence, it is known that such crafts as ceramics, textiles, and metallurgy were all well developed. Ceramics and textiles have already been discussed and mention made of the possibility of craft specialists. Although gold objects are not numerous in the collections, those that have been found show a mastery of metallurgical techniques. Copper and silver artifacts are also associated with Mochica culture.

Interpretation of the social and political organization is difficult and more uncertain. There is little evidence of any strong political unity for the Mochica region as a whole. Important pyramids and cemeteries are about equally distributed throughout the area, and the battle scenes appear to represent local conflicts within the same culture. The ceramic designs differentiate specialized groups of warriors, messengers, prisoners, and craft artists. Distinctions in social rank were certainly marked. Important individuals, dressed more elaborately than others, are represented as being seated on thrones, being carried in litters, and being pulled on rafts through the water. The details of dress, particularly in headgear and face painting, may also indicate both individual distinctions and clan groupings.

The attention paid to burial and the elaborateness of the grave furniture suggest a developed religion. The ceramics also show quite a hierarchy of supernatural beings. Anthropomorphic beings and human figures with crossed fangs are common. Different types of diseases are faithfully represented in the ceramic art as well as some curing. Medicine men are shown performing cures by massaging the patient and by sucking out disease objects. Music and dancing were well developed and may have had religious connotations. Panpipes, drums, flutes, coiled clay trumpets, and shell trumpets are represented, either in the modeled pottery or by excavated specimens. The dance scenes show groups with elaborate costumes, including winged figures. In many cases, the dancers are represented as skeletons. It seems likely that a cult of the dead or ancestor worship of some kind was a prominent part of the religion.

GALLINAZO

The Mochica culture reached its climax and declined without apparent outside interruption. The type site of the Gallinazo Period[1] which follows is in Virú Valley, and the style is also found elsewhere in the Mochica area. Gallinazo is quite distinct from Mochica, although certain influence is seen in the vessel shapes such as modeled figure jars, stirrup-spouts, and dippers. On the other hand, Gallinazo ceramics (pl. 33) are characterized by negative-painted (fig. 6) rather than positive designs, and by some new shapes which include spout and bridge forms, bird vessels of a simple style, and double jars. The period shows little if any Coast Tiahuanaco influence, and its closest affiliations are with the Recuay culture of the North Highlands. The Gallinazo style is associated with rectangular house foundations on the platforms of pyramids. Burial mounds contain both extended and flexed skeletons. Spindle whorls, textile fragments, figurines, and copper, gilded copper, and silver are all found.

Neither the Gallinazo nor the Coast Tiahuanaco Periods completely eliminate the Mochica tradition, which is revived in modified form in the later Chimu Period. One hypothesis is that with the intrusion of outside cultures, such as Gallinazo and Coast Tiahuanaco, Mochica moved northward to the valleys of Lambayeque and Piura, where it was able to carry along in modified form. In anticipation of future archeological confirmation, the term "Middle Chimu" has been reserved for this hypothetical transition period.

THE EARLY PERIODS: NORTH HIGHLANDS

RECUAY

Recuay is the name of a style and of a period which is centered near the town of the same name in the upper Callejón de Huaylas in the North Highlands of Perú. Recuay style has been found in many parts of the Callejón de Huaylas, east of the Cordillera Blanca and west of the Cordillera Negra, particularly around the town of Aija.

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[1] Recent excavation reports indicate that Gallinazo may be in whole or in part pre-Mochica.

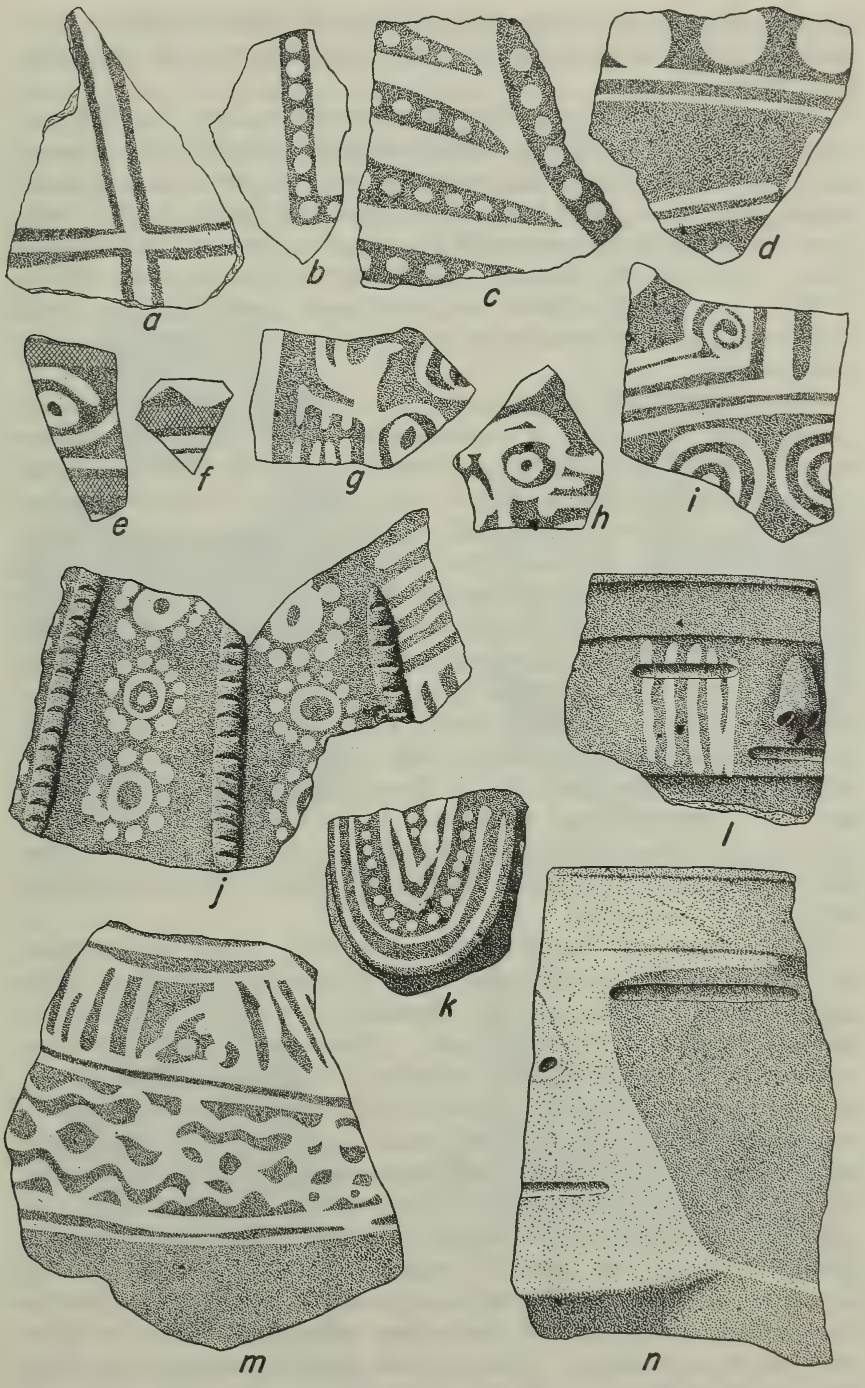
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Figure 6.—Negative-painted sherds from Gallinazo house sites. (After Bennett, 1939, fig. 12.)

Recuay influence has been noted in various Coastal cultures, and recently pure Recuay materials have been reported in the lower Santa Valley.

In the North Highlands, the Recuay style has been found stratigraphically under the Wilkawain-Tiahuanaco Middle Period. Recuay is placed in the post-Chavín horizon on stylistic grounds and on its outside affiliations. For example, the Mochica Period on the North Coast shares many elements with Recuay, and likewise the Gallinazo Period, which follows Mochica, has Recuay fragments mixed with it. A White-on-red style is found in a post-Chavín position in the North Highlands, but its chronological relationship with Recuay is as yet unknown.

The Recuay culture is represented by a distinctive ceramic style, an architectural style, and a stone-carving style. Indirect evidence suggests proficiency in weaving, although specimens of cloth have not been preserved. Likewise, copper pins, needles, and pendants, a few bone objects and some minor shell objects are all associated.

Recuay ceramics are noted for their varied shapes (pl. 34, *a–c*). Twelve major shape categories are recognized, but the variation within each is great, due in part to the fact that many vessels were hand-modeled. These principal shape categories are: (1) open bowls, with and without annular bases; (2) conical handled dippers and bowls; (3) goblets; (4) tripod bowls; (5) jars with high flaring collars; (6) jars with wide disklike rims; (7) collar vessels with short bridges to a modeled head (fig. 7), figure, bird, or animal; (8) double jars; (9) flat-topped jars with small figure modeling; (10) stirrup-spout (fig. 7, *a*) and trifid-spout jars; (11) modeled vessels, including castles, llamas (fig. 8, *b*), fruits, heads and the like; (12) clay trumpets, both straight and coiled.

Monochrome red, black, brown, and white wares are common, particularly in the refuse collections. Ceremonial pottery is decorated by painting and modeling. Some of the painting is positive, in red and white, or white and black. More characteristic, however, is two- and three-color negative painting in which again black, white, and red colors are typical. Vessels are modeled into the shapes of castles, llamas, and the like, and small modeled figures serve as appendages. Men with shields, earplugs and long clubs are represented, but in every sense the modeling is inferior to the Mochica culture.

In the painted design, the jaguars, condors, and serpents, all highly conventionalized, are typical designs. For example, the Recuay jaguar has an angular body and a large comb which projects from the head. Geometric elements are either combined with the figure painting or used alone. These include parallel, straight and wavy lines, cross-hatching, scrolls, steps, triangles, circles, diamonds, zigzag lines, rows of dots, and crosses.

Some subdivision of Recuay ceramics into two or more periods has been suggested. Tello (1929) divides the ceramics into an archaic, simple style, including small monochrome open bowls, jars, and tripod vessels, and a classic Recuay which includes the more characteristic positive- and negative-painted pieces. Kroeber (1926) proposes a Recuay-A style, which includes the more elaborately painted pieces, and a Recuay-B, which emphasizes modeling and positive painting. Excavation evidence may ultimately confirm these divisions.

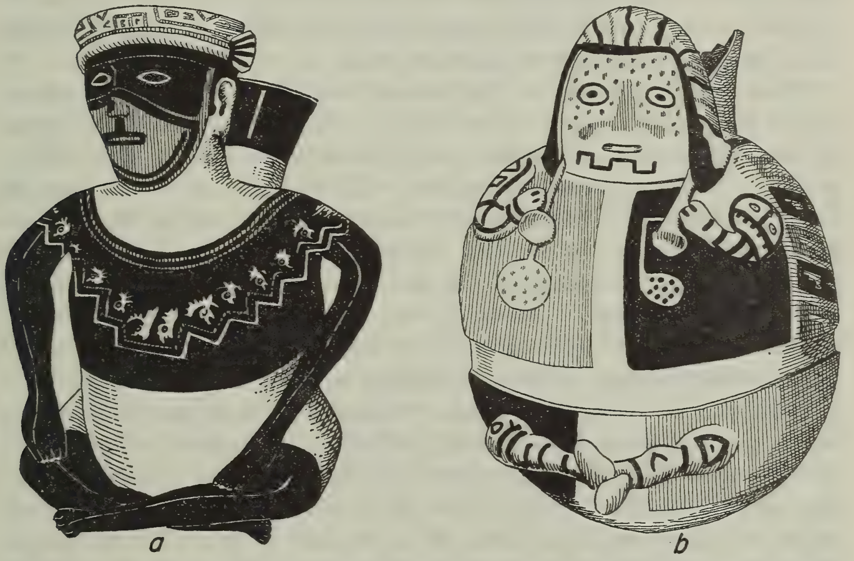


FIGURE 7.—Recuay style pottery from Callejón de Huaylas. (Redrawn from Tello, 1929, figs. 54, 55.)

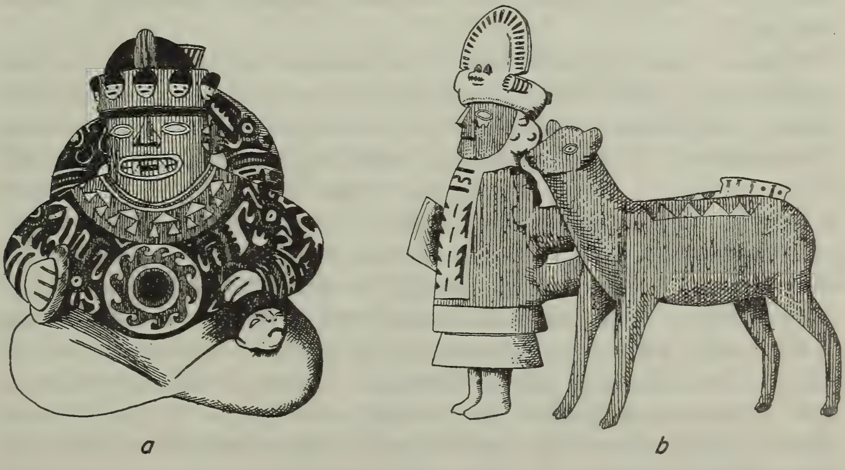


FIGURE 8.—Recuay style pottery from Callejón de Huaylas. (Redrawn from Tello, 1929, figs. 56, 57.)

The typical Recuay statue in the Aija region (pl. 34, *e–g*) represents a seated male or female figure with the knees drawn up and the toes turned in. Male figures have a shield on the left arm, hold a club in the right hand, and frequently have a suspended trophy head around the neck. All statues are decorated with elaborate incised designs which reproduce many of the elements found on the ceramics. In the vicinity of Huaraz, statues are found which represent seated male figures with their legs crossed and their hands on their knees. Except for the head band, these statues are not decorated. Their assignment to the Recuay Period is uncertain since they have not been definitely associated with Recuay ceramics or ruins.

Other stone carving in the Recuay region includes flat slabs or lintels with relief designs representing profile pumas and small human figures, and human or puma heads on rounded tenons for wall insertion. Again positive association with the Recuay Period has not been established. These carved slabs and sculptured heads were probably intended for building units. However, the stone carvings are rarely found in buildings but are scattered at random around the hills and in the fields. It is suggested from the seated position of the statues that they might have been intended as representations of mummy bundles and as such associated with ancestor worship.

In the North Highlands, Recuay ceramics, burials, and house refuse are associated with subterranean galleries. A typical gallery has a round or square shaftlike entrance about 26 inches (65 cm.) in diameter and about 7 feet (2 m.) deep. At the bottom of the shaft a doorway enters a gallery which is from 25 to 65 feet (7 to 20 m.) in length. Great slabs line the sides and cover the top of the gallery, with the spaces between the slabs chinked with small stones. The slabs are hewn into rough shapes, but are not, properly speaking, dressed stonework.

There are many types of houses and perhaps temples in the Callejón de Huaylas. Above ground are stone houses with one, two, and four rooms, and houses or temples of two or three floors. Subterranean constructions are also numerous, including the galleries mentioned before, houses of one room, houses with a central room and two to seven side niches, and houses with two floors below ground. The subterranean houses all employ a slab building technique, and the above-ground houses usually use split stones piled up for walls. It is not possible to assign all of the house types to specific periods. Some of the houses built above ground are known to be associated with the Tiahuanaco-influenced Middle Periods. Others of the above-ground and subterranean houses are probably assignable to the Recuay Period. It is evident that much more scientific work is needed in the North Highlands.

THE EARLY PERIODS: SOUTH HIGHLANDS AND BOLIVIA

In most parts of Perú, the Early Periods are those which come between the pan-Peruvian Chavín and Tiahuanaco horizons. The South Highlands, including the Puno Department of Perú and the altiplano of Bolivia, are more difficult to analyze in the same terms since the Chavín horizon has not yet been found there, and since they are the center of development of Tiahuanaco culture. Consequently, the designation Early Period in the South Highlands is here used for cultures which were apparently developed before the era of Tiahuanaco expansion. Unfortunately, sharp distinctions cannot always be made. The following cultures are here considered Early Periods, either in whole or in part: Early Tiahuanaco, Classic Tiahuanaco, Chiripa, and Pucara.

The term Tiahuanaco is used as the name for a site in Bolivia, as the name for a style, and as the name for a number of periods. In its total connotation, Tiahuanaco is exceedingly important in Perú-Bolivia archeology. In discussion, Tiahuanaco must logically be divided into two phases: first, Highland Tiahuanaco, an Early Period in the South Highlands; second, Coast Tiahuanaco, representing the expansion of the style which characterizes the Middle Periods throughout much of Perú. Although these two phases are undeniably related, all authorities agree that the Coastal Tiahuanaco is more than a simple extension of Highland Tiahuanaco.

In general, Tiahuanaco Periods are important wherever found. In Bolivia, the ruins at the Tiahuanaco site are the most elaborate of any found in that country. On the Coast, although imposing ruins have not as yet been associated, ceramics, textiles, and other artifacts are numerous and elaborate. The Tiahuanaco style spreads over a wide area, including most of the Coast of Perú, the North Highlands of Perú, North Chile, the Eastern Cordillera of Bolivia, and possibly parts of Ecuador and Northwest Argentina. This wide expansion, particularly in Eastern Bolivia, may allow cross-dating with non-Andean archeological periods. In other words, a careful Tiahuanaco sequence might provide a key for relative dating of a major part of South American archeology.

The site of Tiahuanaco is located about 34 miles (21 km.) south of Lake Titicaca. The principal ruins cover an area about 3,275 feet (1,000 m.) east to west and 1,475 feet (450 m.) north to south. The largest structure, called Acapana, is a natural mound artificially reshaped and once stone-faced as a stepped pyramid. The ground plan has a stepped pattern with over-all dimensions of 690 by 690 feet (210 by 210 m.), and the height is about 50 feet (15 m.). A large excavated depression on the top served as a reservoir, judging by the remains of a dressed-stone overflow. House foundations are also found on top of the mound, and some suggest that the structure was intended as a fortress or a temporary place of refuge.

Northwest of Acapana is a large construction called Calasasaya. Today this consists of dressed-stone uprights enclosing a rectangular area about 445 by 425 feet (135 by 130 m.). Much archeological evidence suggests that this construction was once in the form of a terreplein with a stone facing wall of which the uprights are about all that remains. It is certain, however, that small, well-cut stones were used to complete the wall between the uprights. In the center of the western wall is a stairway composed of some six massive steps, which leads to an interior sunken court some 195 by 210 feet (60 by 64 m.) in size. The decorated, monolithic gateway commonly called the "Gate of the Sun" and various carved statues are found at Calasasaya.

West of Calasasaya is the "Palacio" enclosure, 195 by 180 feet (60 by 55 m.), once surrounded by double walls. East of Calasasaya is a semisubterranean construction, 70 by 75 feet (21 by 22 m.), faced with miscellaneous uprights and small stones. Carved stone heads on tenons or on blocks were inserted in the walls. Some writers consider this building as early, but it has the appearance of a late construction in which stones and stone sculpture were collected from other parts of the ruins and reassembled. Well outside of the main group of the ruins is a unit called Puma Puncu. This consists of many large sandstone and lava blocks which form a platform with a row of low seats along the eastern side. Nearby are the remains of numerous monolithic gateways, all of them broken and out of place.

The architectural features of the Tiahuanaco site can be summed up as follows: (1) Sandstone and basalt are used in the construction. Both are found in the constructions of Calasasaya, Puma Puncu, Acapana, and the Palacio. Although some archeologists have suggested that the use of sandstone precedes that of basalt, the evidence is not clear. (2) Construction work is commonly of platform type, as illustrated by the stone-faced pyramid of Acapana, the terreplein of Calasasaya, and the open platform of Puma Puncu. (3) Mass is the characteristic effect in the constructions. (4) The facing technique is that of uprights set at intervals and filled in between with smaller fitted stone. (5) The masonry is of well squared and dressed stone blocks and slabs, commonly fitted by angular notches and joints. Copper cramps were used for joining blocks. (6) Stairways are common. (7) Carved stones are used as an architectural feature, either in the form of stone heads on blocks or as decorated facades. The statues found around the ruins might also have had architectural functions. (8) Monolithic gateways are typical. (9) Both surface and underground canals are common. (10) Although a series of small, subterranean rooms made of well-dressed stone were found, underground construction is not characteristic.

The numerous carved stones at the Tiahuanaco site include: statues carved in the round; relief or incised work on slabs, blocks, and gateways; carved stone heads, some on blocks and some on tenons for insertion in walls. The stone carving has been classified into four major categories which include a number of styles. A brief description of these categories includes suggestions of time-period affiliations where possible.

Group 1: Realistic stone carving.—This group includes two kneeling statues which stand in front of the church at Tiahuanaco, two kneeling statues recently discovered near Tiahuanaco, and two carved stone faces with round tenons for wall insertion. These pieces stand in contrast to the more conventionalized carvings. The faces are sculptured with prominent cheek bones, jutting jaws, and flaring lips. The figures are represented in kneeling positions. Head bands are decorated with curvilinear designs. This group is usually considered to represent the earliest stone carving at the site, although this is not confirmed by excavation evidence.

Group 2: Conventionalized classic figures and heads.—This group includes the classic monolithic statues (pl. 36, *right*), the style of relief work found on the "Gateway of the Sun," the double statues represented as relief on pillars, and the seated anthropomorphic figures and sculptured human heads projecting from squared stone blocks. The carving in this group is stiff and conventionalized. The statues are essentially large, squared pillars with little emphasis on sculpture in the round. Many of the statues are decorated with fine-incised designs, apparently intended to represent textile patterns. The group includes most of the best-known stone sculpture, and the incised designs are generally considered to be typical of Tiahuanaco as a whole. There seems to be little doubt that the entire group pertains to the Classic Tiahuanaco Period.

Group 3: Technically decadent, pillarlike statues and heads.—This group does not have the unity of the first two but includes such miscellaneous styles as plain, squared, pillar-type statues, flat stones with crude faces chipped on them, rounded boulders with one side fashioned into a human face, and lizards, salamanders, and toads carved on large rocks. This group probably does not represent a single period, since the only unity is technical decadence. Some of these statues and carvings might belong to the Decadent Tiahuanaco Period.

Group 4: Geometric carving.—This group includes slabs elaborately designed with angular lines and intricate scrolls, and four cornerstone heads with a more stylized treatment of the face than is common in other groups. Although the geometric group is quite distinct, there is no evidence of its period affiliation.

Textiles are not preserved in the rainy altiplano of Bolivia. Small clay spindle whorls are found, and the incised designs on the statues resemble textile patterns. Decorated head bands, waist bands, ponchos, and other articles of clothing are depicted. Furthermore, tapestries from the Coast Tiahuanaco Period have the same designs as those incised on the statues. This indirect evidence indicates that weaving must have been one of the outstanding crafts of Highland Tiahuanaco.

The site of Tiahuanaco is unique in Bolivia. Other sites have dressed-stone buildings, statues, and ceramics, but none is as complex or elaborate as the type site. On the other hand, Tiahuanaco does not seem to have been a large village or city, but rather an important religious center, such as the contemporary Highland town of Copacabana and the historic Coastal site of Pachacamac. Most of the constructions at Tiahuanaco are of large size, and none seems suitable for utilitarian purposes. The buildings, however, must have been planned in advance, at least for their over-all finished appearance. Some slabs are cut out in a way that suggests a building in miniature. Neither sandstone nor basalt is immediately available at the site for building material. As the nearest known source of sandstone is 3 miles (5 km.) away, the hauling of stones weighing up to 100 tons implies well-organized mass labor. Dressing, shaping, and placing these large slabs and blocks also implies engineering skill and manpower. The total construction of Tiahuanaco was probably not done at any one time. Many of the buildings may never have been completed. The "Gateway of the Sun" is certainly not in its original position, and many of the figures in its design are unfinished (pl. 35). This suggests that the building of Tiahuanaco continued over a long period without any great concentration. If Tiahuanaco had been a religious center, this sporadic workmanship might be accounted for on the grounds that the necessary numbers of workers would only have been assembled at certain times of the year.

Much has been written on the question of who were the builders of Tiahuanaco. This section of Bolivia today is the home of the *Aymara*, or *Colla* people, who may well be the descendants of the original builders. The *Colla* were inhabiting the region when the *Inca* arrived, and the archeological evidence indicates that the Tiahuanaco culture persisted almost up to *Inca* times. Many questions raised about the Tiahuanaco site must remain unanswered until large-scale excavations are undertaken.

EARLY TIAHUANACO

In the lowest levels of the stratigraphic excavations at Tiahuanaco, a type of material is found which underlies the Classic Tiahuanaco style but bears little if any relationship to it. It is called Early Tia-

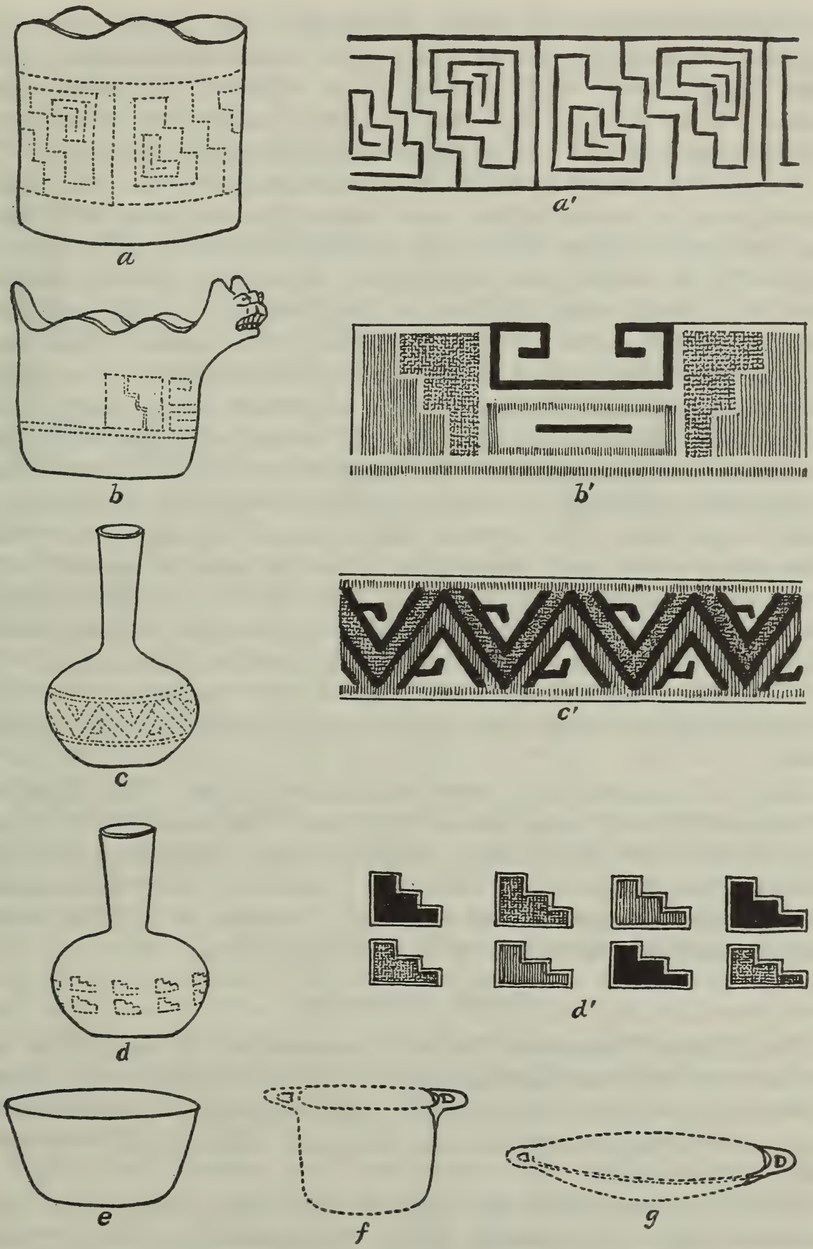


FIGURE 9.—Shapes and designs on Early Tiahuanaco pottery. *a–a′*, incised design filled with colors (in incisions) on a flatbottom, wavy rim libation cup; *b–b′*, the puma-head type flat-bottom cup with painted design; *c–c′*, long-necked decanter shape with the typical angular design in several glaze colors, the most typical design of all ware of this period; *d–d′*, a variation of design on the same type bowl as shown in *c–c′*; *e–g*, plain ware shapes of this period encountered in the excavations. (After Bennett, 1934, fig. 13.)

huanaco only because it is found at that site. The artifacts seem to represent dwelling-site refuse rather than ceremonial remains, since they include small clay buttons; stone polishers; hammerstones; pieces of slate, flint, obsidian, and quartz; a T-shaped stone ax; bone spatulas, needles, and points; and corroded fragments of copper.

Ninety-five percent of the pottery fragments are from plain ware vessels, such as round-bottom open bowls, globular bowls with flaring rims, and shallow dishes with horizontal handles. The typical shapes (fig. 9) of the incised and painted vessels are: globular decanters with long constricted necks; flat-bottomed spittoon-shaped bowls; and fretted-rim incense bowls, some with a modeled puma head on the rim. Painting is either a simple red-on-buff, or a polychrome-on-buff employing black, white, red, brown, orange, and yellow. All of these colors are applied directly to the unslipped clay and burnished to a glossy shine. The characteristic Tiahuanaco outline is not found, although on some pieces the designs are enclosed in a solid black area. The typical designs are a zig-zag linear with alternating colors, and zoomorphic figures of peculiar animals and birds which vaguely suggest pumas and condors. Only fragments are found in the stratigraphic excavations, but complete vessels in the collections suggest that a cemetery is to be found at Tiahuanaco.

No building units have been correlated with this period, but it is possible that the Group One type of realistic carving might belong here.

Early Tiahuanaco has a very limited distribution. The Island of Titicaca is the only place outside the site of Tiahuanaco where it has been found in any abundance. Although Early Tiahuanaco precedes Classic, it is not necessarily its origin. Likewise, Early Tiahuanaco is not directly comparable to any other Peruvian or Bolivian style. Futher excavation is needed to resolve this problem.

CLASSIC TIAHUANACO

The Classic Tiahuanaco Period is represented in Bolivia by an architectural style, a stone-carving style, and a ceramic style. Since preservation is poor in the altiplano, less is known about other crafts, such as weaving, woodwork, and bonework, although all were presumably developed.

Little is known about the origin of the Classic Tiahuanaco. Its contrast with the preceding Early Tiahuanaco has already been pointed out. Some archeologists suggest that it was imported to Bolivia from some other region, but no evidence is available which would indicate the source or direction of such an immigration. The Classic style shares certain characteristics with Pucara, Chavín, Recuay, Mochica, and Nazca, but in no case is there evidence that any of these actually produced it. Classic Tiahuanaco as a cultural complex has a limited distribution in the Highlands of Bolivia and the South Highlands of Perú. However, a closely related derived style is widespread and forms the basis of the Middle Periods. Thus, it is logical to assume that at least a part of the Classic Tiahuanaco was contemporaneous with such pre-Middle Periods as Nazca and Mochica. In Bolivia, it remains as the dominant culture almost to *Inca* times.

Most of the masonry at the site of Tiahuanaco, as well as the Group Two stone carving, is assigned to the Classic Period. Quantities of ceramics are found at the site or in the nearby cemeteries. Unfortunately, few descriptions of graves have been published. Some flexed burials have been found in simple unlined graves, accompanied by four or more ceramic vessels. However, in the Cochabamba region of Bolivia, burials are in stone-lined box graves with stone covers.

Classic Tiahuanaco ceramics (fig. 10; pls. 35; 36, *top*) conform generally to eight major shape types. (1) Smooth, flaring-sided goblets with flat bases. (2) Hollow-based libation bowls with two vertical side handles; some have wavy rims. (3) Modeled puma or llama vessels, apparently used for some kind of incense. (4) Flat-based open bowls with squat bodies and wide flaring rims. The design is usually painted on the inside of the rim. (5) Vases. (6) Open bowls with narrow flaring rims. (7) Flat-based flaring-sided cups. (8) Round-based flaring-sided cups. Most vessels have simple outlines without appliqué adornos and usually without handles. Modeled vessels are infrequent.

Polychrome painted design employing black and white on a red slip base is typical. A standard technique is to outline the design figure in black or white and then fill in with other colors, such as yellow, gray, and brown. The colors are rich and well-applied, and the whole vessel is well polished. The designs are conventionalized and limited in scope. Geometric designs, such as the step or step and scroll, are likewise frequent. A puma figure, an elaborate condor, and a human figure or head are all common. Most are in profile, and are repeated around the vessel. Other designs occur as well as combinations of pumas and condors, but, in comparison with other ceramic styles of the Perú-Bolivia region, the range is limited.

Gold, silver, copper, and bronze were all utilized. Copper and bronze were cast into T-shaped and I-shaped cramps, axes, pins, and knives. Some archeologists credit this period with the invention and distribution of bronze. Gold and silver were decorated with relief designs, augmented by incised lines. Gold plaques, cups, masks, and small cut-outs have been found.

Stone artifacts are numerous and varied. There are incised and plain bowls, flat snuff-tablets with incised designs, and more utilitarian objects such as clubs, pounders, polishers, and T-shaped or grooved

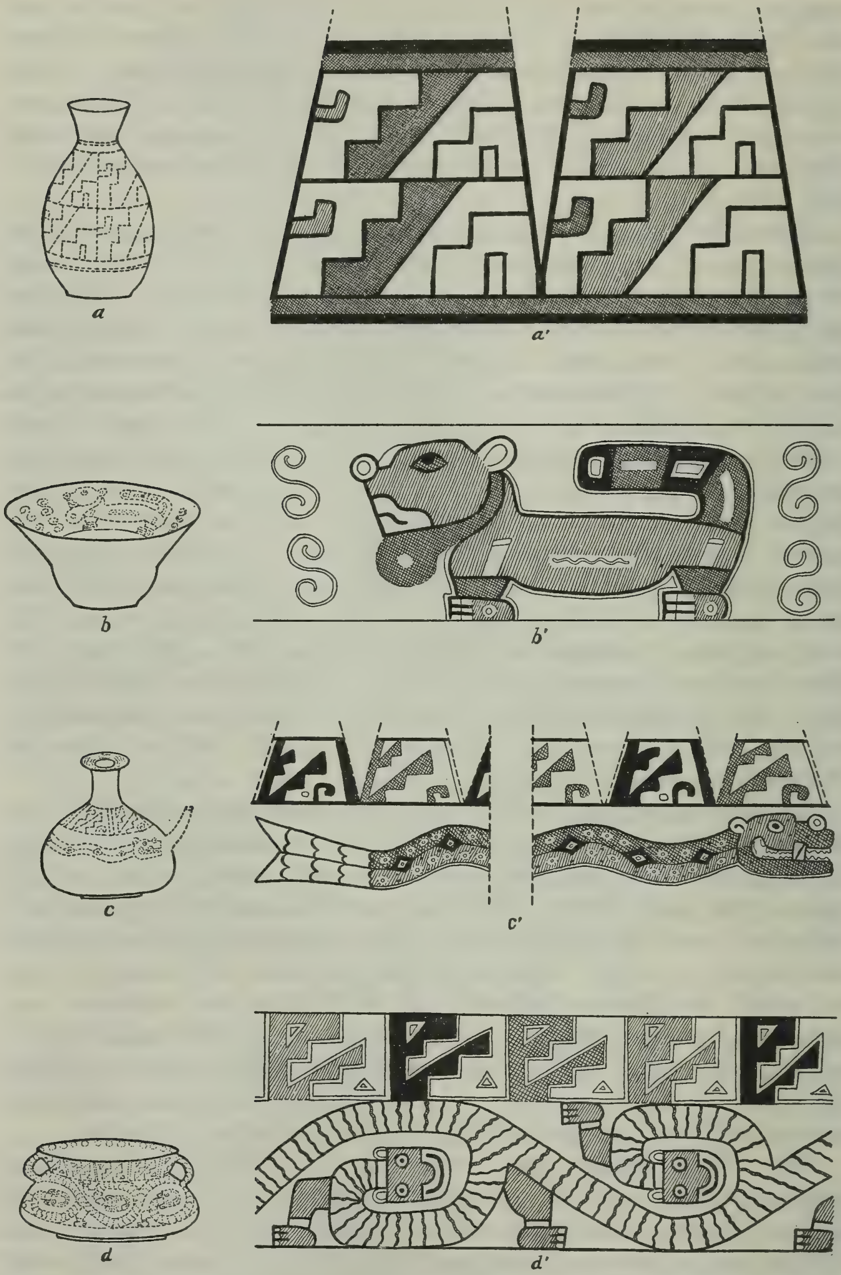


FIGURE 10.—Classic Tiahuanaco pottery shapes and designs. *a–a'*, vase shape with typical step design; *b–b'*, open-bowl shape with design on inner rim, of Classic pumas; *c–c'*, constricted-neck bowl with spout and serpent design; *d–d'*, this bowl and design are both unusual Classic style. (After Bennett, 1934, fig. 16.)

axes. Bone needles, disks, and incised tubes are found, and shell wa- cut into disks and beads. Nothing is known about woodwork, cals abashes, basketry, and other of the more perishable materials, although they doubtless existed.

The Classic Tiahuanaco Period places great emphasis on masonry. No other Peruvian period matches the exactness and precision of the stonework in its careful cutting, dressing, squaring, and notching. The nearest rivals are Chavín and *Inca* but even in those cultures the masonry is inferior.

Classic Tiahuanaco also emphasizes the stone-carving design style, in contrast to stone carving as such. For people so adept in the cutting and working of stone, the sculpture is remarkably simple and plain. The intricate designs, however, which are applied to statues, slabs, and gateways are surprising to find on stonework. For example, the "Gateway of the Sun" has a central, upright figure with an elaborate crown and a staff in each hand. On both sides of this central figure are three rows of running, human figures, some with condor masks. Along the base of the gateway is a frieze of front-view faces, each surrounded by tab appendages. The incised designs on the statues add other elements, such as condor heads, puma heads, fish heads, and geometric units. The style as a whole is angular, rigid, and highly conventionalized, and few concessions are made to the difficult medium on which it is applied. The similarity to textile designs has already been mentioned.

The ceramic design, in contrast to that found on stonework, is quite simple. Thus two design styles can be recognized, one for ceramics, one for stone carving and textiles. These two groups are not altogether mutually exclusive, but the more elaborate designs of the stone carving rarely if ever occur on ceramics; and, likewise, the winged king condor, the profile head, the full-front-bodied warrior, and even the curl-tailed puma are not common on carved stone. Tiahuanaco style has generally been defined in terms of the stone-carving design, but the ceramic style is clearly recognizable.

Little can be reconstructed about the daily life of the builders of Tiahuanaco. The art and the existing remains present only a limited picture of social organization, political organization, or the economic life of the times. Tiahuanaco art is highly impersonal. In all probability, the designs themselves had symbolic meaning, but sound interpretation is difficult. The central figure on the "Gateway of the Sun" has been called an important religious personage, perhaps Viracocha; the orientation of Calasasaya with the movements of the sun has been used to imply a sun cult; the ubiquitous step design has been called symbolic of the mountains which flank the altiplano; but, in reality, there is slight factual basis for such interpretation.

The harsh environment of the altiplano makes it unlikely that the economic life in the past was very different from that of today. Potatoes, oca, and quinoa have long been the basic foods. The domesticated llamas and alpacas are common today and their presence in the past is indicated by bones, modeled pottery, and painted designs. It is doubtful if the available farm land was much greater in the past, and consequently the population has probably always been distributed in clusters around the general region of Lake Titicaca. The interpretation of the site of Tiahuanaco as a type of Mecca to which pilgrims came to pay tribute in labor and stone carving is feasible, but an alternative explanation that Tiahuanaco was the center of a large and concentrated population is not consistent with existing environmental conditions.

CHIRIPA

The Chiripa style has been found at its type site on the south shore of Lake Titicaca and in a refuse deposit on the Island of Pariti. In spite of the limited discoveries, Chiripa is represented by a distinctive house type, a village pattern, characteristic ceramics, and numerous bone tools, stone artifacts, and metals. No Tiahuanaco influence is seen in these materials. Stratigraphic excavations have placed the Chiripa Period as definitely pre-Decadent Tiahuanaco, but whether it comes before or after the Classic Tiahuanaco is still not established. In any case, Chiripa is of considerable interest, since if it is shown to be post-Classic, it would demonstrate that foreign styles could exist in a region dominated by Tiahuanaco; and if it is considered to be pre-Classic, it represents an important Early Period.

The Chiripa village consists of a number of rectangular houses, built corner to corner around a circle. At the type site, 3 houses were uncovered and an estimate was made that a total of 14 formed the village circle. All the doorways face toward the central plaza. The house walls have 3 feet (1 m.) of foundation made of small stones packed in clay. The walls were built up higher with rectangular adobes and roofed with sticks and grass. All walls are double, and the hollow space between served as storage bins entered from the inside of the house by means of rectangular windows with adobe lintels. The doorsteps are paved with flagstones, and the entrance itself has a double thick wall with a slot for a sliding, panel-type door. The circular village plan and the double-wall house type have not been found elsewhere in Perú and Bolivia. This is surprising, since house walls with an air space between the two facings would seem exceedingly practical for warmth in the cold altiplano.

The houses rested on a low, raised ridge below which was about 6½ feet (2 m.) of stratified deposit containing wash dirt, rough stone walls, a few flexed burials, potsherds, and other artifacts. Under the packed clay floor of one house were 13 graves, some in stone-lined and covered boxes. These contained flexed burials, some thin strips of gold, a few shell beads, and remnants of plain cloth, but no pottery. Everything indicates that the house was not abandoned after the burials had been put beneath the floor.

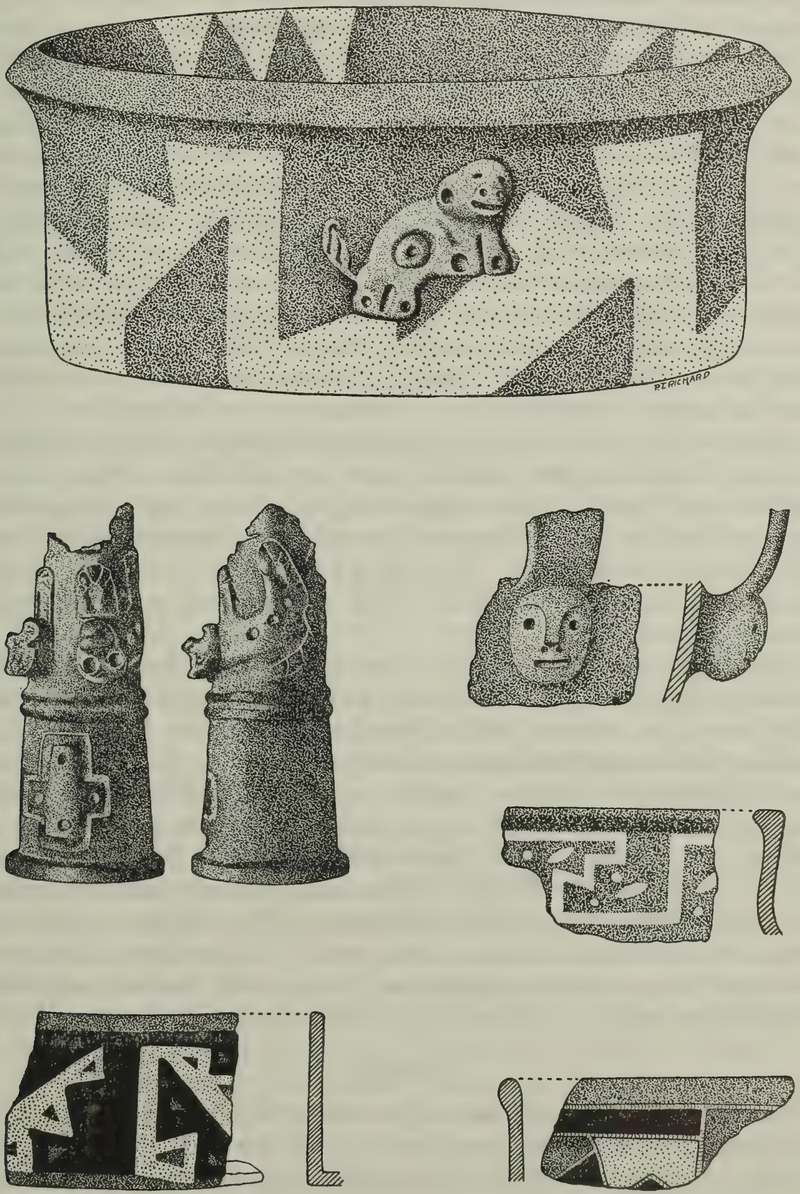


Figure 11.—Chiripa modeled and painted ware. (After Bennett, 1936, figs. 27, 28.)

Ceramics (fig. 11) are represented by fragments, although a few vessels can be partially restored. Similar fragments are found along the house floors and in the strata underneath the houses, which suggests that the site was occupied for a relatively long time period. Many of the fragments are from plain brown ware cooking vessels. Most of the painted pieces are from a flat-bottom open bowl with perpendicular sides and a slightly out-flaring thick rim. One restored vessel of this type has a diameter of 12 inches (30 cm.) and a height of 5 inches (14 cm.). Other vessel shapes are rare. The characteristic painting is with a thick yellow pigment on a red-base slip. Black or brown are infrequent additions, and on some pieces the color areas are separated by incised lines. The painted designs are mostly variations on a simple step pattern and triangles. Many fragments have relief decoration in the form of human faces or of pumas with the body in profile and the head in front view. Included with the ceramics are long tubes, burnt black on the inside and decorated on the outside with incised and relief design. These tubes may have been used as fire blowers. Finally, painted clay bricks are found near the houses, with their sides colored green, white, and red.

Bone artifacts are numerous, and consist of polished points, needles, buttons, beads, scrapers, chisels, knives, and the like. Some of the scrapers and knives have serrated edges. Stone artifacts include hand grindstones and metates; chipped hoes or scrapers; bolas; and one T-shaped, polished ax. Both shell and stone beads are common. Although metal artifacts are rare, both copper beads and gold strips are associated.

At the type site, the houses had burnt down and the debris of the circular village formed a mound with a slight depression in the center. This mound was selected in the Decadent Tiahuanaco Period for the building of a semisubterranean, stone-faced temple. Likewise, Decadent Tiahuanaco intrusive graves cut into the old Chiripa house foundations. Thus, the Chiripa Period is clearly established as earlier. The Chiripa refuse layer on the Island of Pariti seemed to cover a grave of the Classic Tiahuanaco Period. Unfortunately, this stratigraphy is not clearly established. The Chiripa style is still limited to these two sites, and consequently its position in the total Peruvian framework remains obscure. At present, the only suggested relationship is with the Pucara style in the South Highlands of Perú.

PUCARA

In the Department of Puno in the South Highlands of Perú, north of Lake Titicaca, is an important site known as Pucara (pl. 38). Pucara is represented by a characteristic type of stone building, a type of statuary, and a distinctive ceramic style. Although it has as yet to be thoroughly described, the implication at the moment is that it represents a basic style like Chiripa plus a strong Tiahuanaco influence. At the same time, it cannot be dismissed as another branch of Highland Tiahuanaco since there are too many distinctive and independent features. The masonry employs dressed stone without the Tiahuanaco jointing and notching. Stones are arranged in a pattern of large, concentric enclosures with small roomlike divisions. The stone carving includes some statues which resemble those at Tiahuanaco but without the strict conventionalization nor the use of the fine-line incised design. Perhaps all the stone carving does not belong to the Pucara Period since the Tiahuanaco Group Four, or geometric style, is also found.

The ceramics (pl. 37) are characterized by the typical Chiripa shape, that is, a flat-bottom open bowl with perpendicular sides and a slightly out-flaring thick rim. However, this is but one of a number of Pucara shapes. Likewise, decorated clay tubes are associated. The vessels are painted in black and yellow on a red base, and the color areas are commonly separated by incised lines. Simple geometric elements are common, but the designs are dominated by the feline figure, either painted or in low relief. The style is far more developed than Chiripa and seems to have considerable Tiahuanaco influence in it. The distribution and ultimate importance of this site and period must await further exploration and publication.

DERIVED TIAHUANACO

The Tiahuanaco style materials outside the altiplano of Bolivia do not represent an expansion of the total Classic Tiahuanaco complex. The characteristic architecture, stone sculpture, and even ceramics have not been found outside of the home region. At the same time, the materials from the Eastern Cordillera of Bolivia, from North Chile, and from the Coast of Perú bear an undeniable relationship to the Classic Tiahuanaco style. The term "Derived Tiahuanaco" is used to express this relationship, and there is a possibility that a period representing such a derived style may be isolated. For example, at the site of Arani near Cochabamba, one group of pottery is well made and utilizes three- and four-color designs on a red base. This group cannot be classified as Decadent Tiahuanaco, but at the same time it lacks many of the typical Classic Tiahuanaco characteristics. Likewise, ceramics from the Island of Pariti in Lake Titicaca vary from the typical Classic Tiahuanaco, in spite of the technical excellence of manufacture. However, more evidence is needed to establish the Derived Tiahuanaco as a definite period. If ever so isolated, it should be placed chronologically as transitional from the Early to the Middle Periods.

THE MIDDLE PERIODS

The Middle Periods in the Perú-Bolivia region correspond roughly to the pan-Peruvian Tiahuanaco horizon. Subdivisions and local styles are numerous, as can be judged from the chart (p. 80) and from the glossary of period terminology (p. 74). The principal uniting factor is the influence of the Tiahuanaco style. It has already been mentioned that no known period of Highland Tiahuanaco spread in its entirety to the Coast of Perú. Consequently, it is advisable to distinguish the Coastal style with the designation Coast Tiahuanaco.

In this section, the Middle Periods on the Coast of Perú are described as a whole, although two major subdivisions are recognized, and numerous local variants are mentioned. Following the discussion of the Coast, the Middle Periods of the North Highlands and of the South Highlands and Bolivia are described.

THE MIDDLE PERIODS: COAST OF PERÚ

THE SITES

In the literature, Coast Tiahuanaco styles are also called Epigone or Epigonal and, in Perú, by the name Andino. Local terms are frequently used to indicate materials excavated at a particular site in a valley. The glossary of period terminology explains the various terms. The following list reviews some of the coastal valleys and sites in which Middle Period materials have been encountered. It is reasonable to assume that similar finds will be made in every valley between Nazca and Chicama, but although the local collections confirm this, excavation information is not always available. The list starts on the Central Coast at the site of Pachacamac, not because it is considered to be the center of distribution but because it was one of the first places in which scientific excavations revealed the presence of the Coast Tiahuanaco materials.

(1) **Pachacamac.**—The ruins of Pachacamac are situated near the mouth of the Lurin Valley. Uhle's (1903) excavations at the unit called Pachacamac revealed an old temple, made of rough stone, which had later been covered by debris and reused as the foundation for a step-pyramid construction which can still be seen. Graves were found in the soil at the base of the older temple, intrusive in the fill of the covering debris, and at the base of the more recent pyramid. These three grave levels contained materials of three distinct styles, each of which was confirmed by finds in the cemeteries around the other parts of the ruins. Uhle divided the materials from the oldest graves into two periods on stylistic grounds; namely, a style closely related to Highland Tiahuanaco and a style, apparently derived from the first, which he called by the term "Epigone." The graves from the middle level contained materials which Uhle designated as post-Epigone. The upper graves contained a coastal variant of the *Inca* style. The graves of the Tiahuanaco, Epigone, and post-Epigone styles, all belong to the Middle Periods under discussion here.

(2) **Nievería.**—Local collections in the Rimac Valley contain specimens of the Coast Tiahuanaco style. The collection excavated at Nievería is no exception, but is, unfortunately, badly mixed. In the published analysis of this material (Gayton, 1927), the strains called Tiahuanaco Epigonal and Nazca-Y definitely pertain to the Middle Periods.

(3) **Ancón.**—The excavated grave materials from the large cemetery at Ancón were divided by Strong (1925) into several periods. Of these, Middle Ancón-I, Middle Ancón-II, and Late Ancón-I belong to the Coast Tiahuanaco Periods. The stylistic division of these three groups is confirmed in part by grave depths and grave stratigraphy. Middle Ancón-I has an Epigonal style associated with a local incised red ware. Late Ancón-I is a Black-white-red Geometric style. In gereral, Uhle's sequence at Pachacamac is confirmed by the Ancón analysis.

(4) **Chancay.**—At the site of La Calera de Jecuan, 35 graves were excavated which contained various Middle Period styles, all mixed together. Probably more excavation would allow some of these to be distinguished as periods.

(5) **Supe.**—A mixed collection was found at the site of San Nicolás. Careful analysis (Kroeber, 1926 b) allowed this mixture to be divided into two dominant Middle Period styles, although further excavation is needed to confirm this.

(6) **Virú.**—Local collections in the Virú Valley contain quite a variety of Coast Tiahuanaco materials. The excavated sites of Huaca de la Cruz, Huaca Larga, and Taitacantín contained the Black-white-red Geometric style. At Huaca de la Cruz the graves which contained this style of material were intrusive in the Mochica levels.

(7) **Moche.**—On a platform of the Huaca del Sol at Moche, both Coast Tiahuanaco style fragments and graves have been found. Other graves contain the Black-white-red Geometric style. This in part suggests the triple division found at Ancón and Pachacamac. The Huaca del Sol site contained a pressed-relief ware and a style called Queneto associated with the Coast Tiahuanaco. Coast Tiahuanaco pieces have also been found at Chanchan, near Trujillo, but without excavation notes. Local collections, presumably from the ruins of Chanchan, contain several other styles which are probably contemporaneous and related to the Middle Periods. These include Cursive Modeled, Cursive Tripod, Black-white-and-red Recuoid, and Red-and-white Chanchan styles.

(8) **Chicama.**—Coast Tiahuanaco styles are common in Chicama Valley, but the only recorded excavation is at a site called Pata de Burro. The Chicama Valley seems to represent the northernmost limit of distribution of the Coast Tiahuanaco style in its pure form. Influences have been noted in the valleys to the north, but no clear-cut period has been isolated.

(9) **Chincha and Cañete.**—South of Pachacamac, the evidence for the Coast Tiahuanaco is more confused. In the Chincha and Cañete Valleys excavations have still not uncovered any clear-cut Coast Tiahuanaco styles. (Middle Cañete, presumably of the Middle Periods, does not show Coast Tiahuanaco influences. See fig. 12.)

(10) **Ica.**—Middle Periods in the Ica Valley have been designated (Kroeber and Strong, 1924 b) as Epigonal, Middle Ica-I, and Middle Ica-II. The ceramics of all three of these are vaguely related to the Coast Tiahuanaco. The textiles, however, show a much closer relationship.

(11) **Nazca.**—The Middle Ica-I and Middle Ica-II styles are also found in Nazca Valley in the sites excavated by Uhle. The Ica Epigonal is replaced by the Nazca-Y style, which seems to be a vague transition from the earlier Nazca Period to the Coast Tiahuanaco. Other sites in the Nazca Valley, however, contain excellent Coast Tiahuanaco material. The site of Pacheco, although not adequately described, is known to have large urns and other vessels with complex painted designs clearly of Coast Tiahuanaco style.

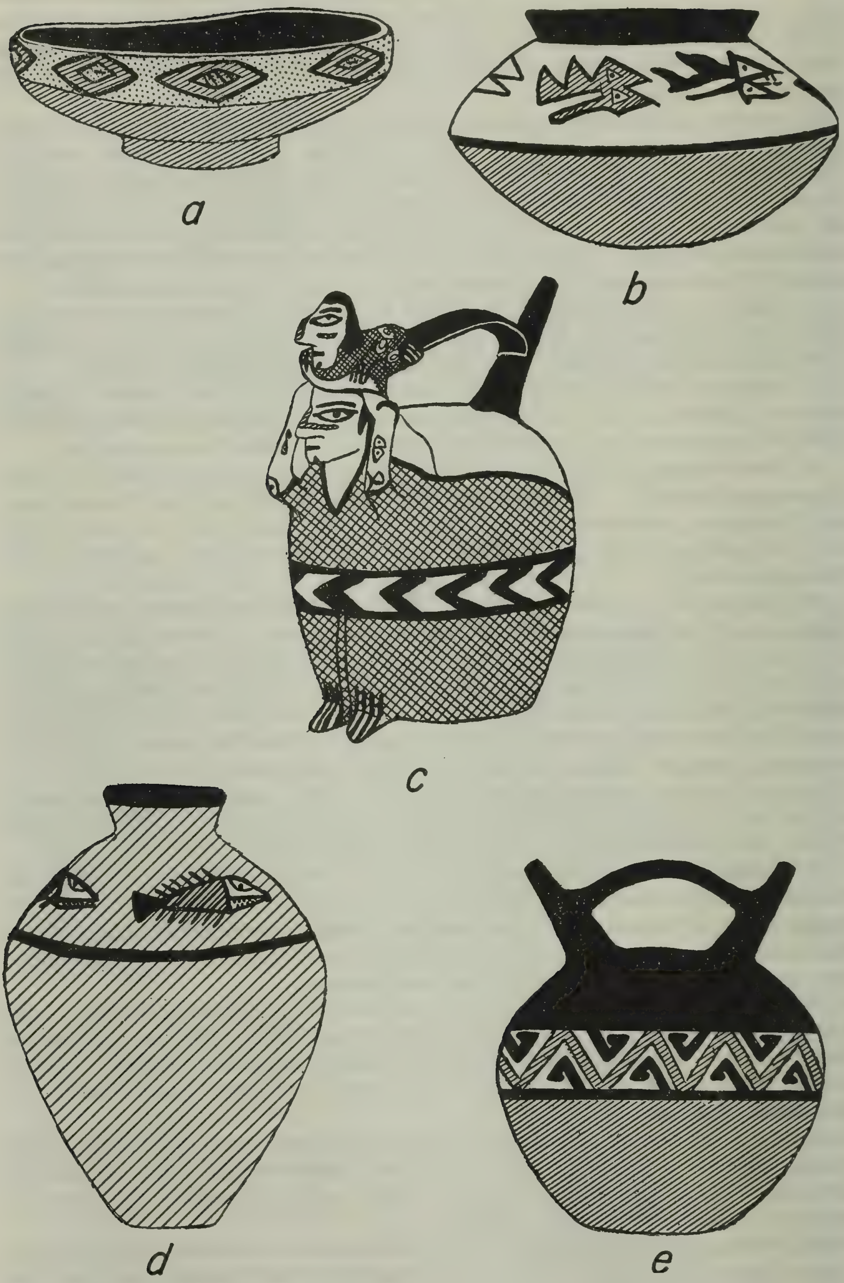


FIGURE 12.—Middle Cañete pottery from Cerro del Oro, Cañete Valley. (Redrawn from Kroeber, 1937, pls. 71, fig. 2; 75, fig. 7; 73, fig. 4; 74, fig. 3; 73, fig. 1.)

The Coastal Middle Periods are divisible into two major subperiods, as well as numerous minor styles and local variations. The first of these major subperiods, called here the Coast Tiahuanaco-A, bears a definite relationship to Highland Tiahuanaco and has a fairly consistent spread up and down the entire Coast. The second major subperiod, here called the Coast Tiahuanaco-B, might equally well be named the Black-white-red Geometric style. Unlike the first subperiod, the Coast Tiahuanaco-B seems to be a coastal development with no direct relationship to Highland Tiahuanaco. In a number of places, such as Moche, Ancón, and Ica, the Coast Tiahuanaco-B is separated from the Coast Tiahuanaco-A by intervening styles or periods. Nonetheless, recent excavations by Willey (Strong, Willey, and Corbett, 1943) reveal an unbroken sequence of development.

The over-all picture is of a dominant style, definitely related to Highland Tiahuanaco, which spread up and down the Coast of Perú. From the beginning, it mixed with local styles and tended to lose its unity. Somewhat later, a local formulation of the earlier style, characterized by Black-white-red Geometric design, in turn spread along the Coast of Perú. Local Middle Period styles developed or intruded in many places on the Coast. Some are contemporaneous with the early, or Coast Tiahuanaco-A, some are contemporaneous with Coast Tiahuanaco-B, and some fall in between the two. Some of these local styles can be satisfactorily placed. Nazca-Y (pls. 24, *bottom;* 25, *d*, *e*, *g*,) and Ica Epigonal (pl. 44, *a*, *b*) are contemporaneous with the Coast Tiahuanaco-A. The post-Epigone style at Pachacamac and Middle Ancón-II fill the interval between A and B (pl. 40, *a-c*). The local styles found at Chanchan and the Huaca del Sol seem to be in part contemporaneous with Coast Tiahuanaco-A and in part in the intermediate period.

Everywhere, the Coast Tiahuanaco represents a mixture, both with earlier Coastal styles and with outside influences from such areas as the North Highlands. This makes the description of the characteristics of the major subperiods exceedingly difficult, as the following résumés indicate.

COAST TIAHUANACO-A

The Coast Tiahuanaco-A is represented by the Tiahuanaco and the Epigone styles at Pachacamac (pl. 39), by Middle Ancón-I, and by the Pacheco site in Nazca Valley (figs. 13, 14). Although not as clearly isolated, the Epigonal styles at Ica, Nievería, Supe, and Moche can also be included.

In general, Coast Tiahuanaco-A is characterized by the following features: (1) Ceramics with the basic colors of black and white on a red-slip base. (2) Some vessels or fragments with four or more colors on a red-slip base. (3) Some vessels or fragments with polychrome

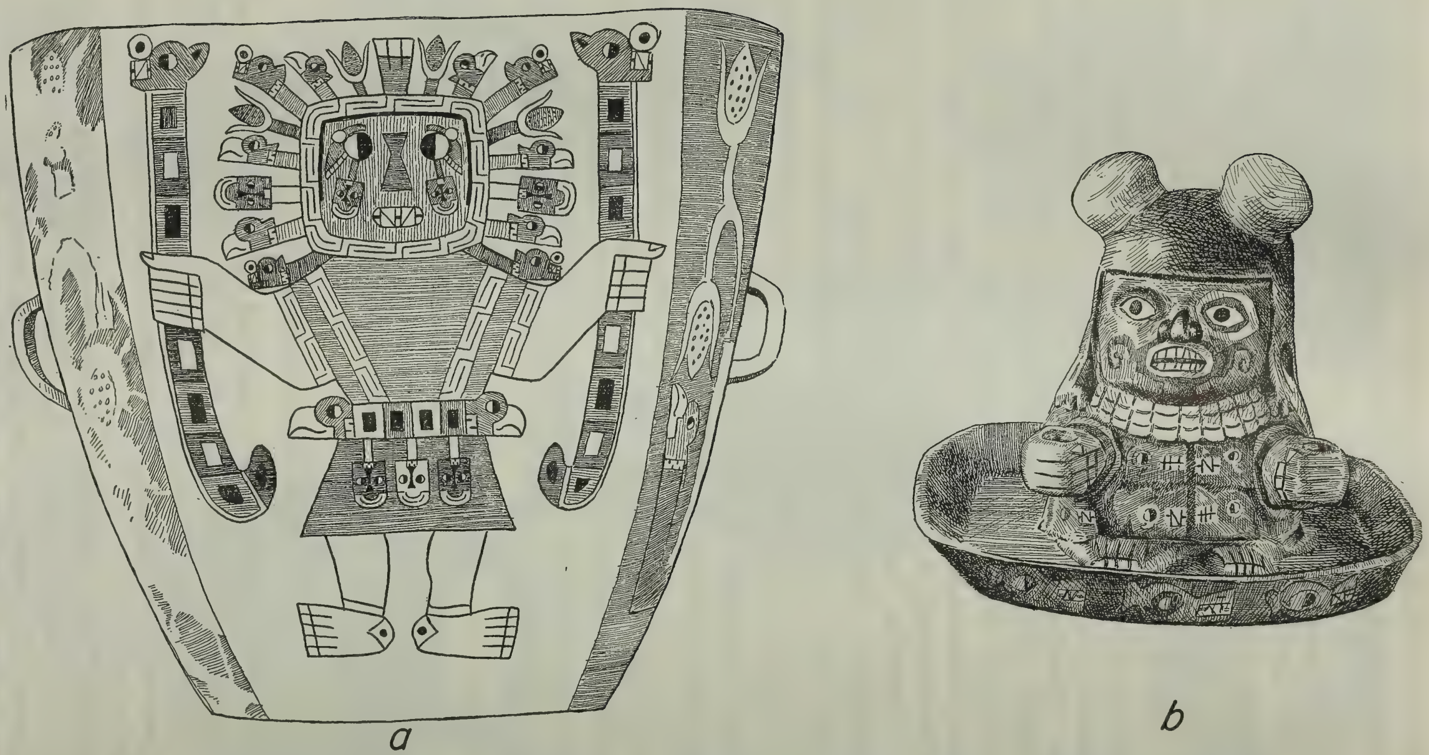


Figure 13.—Coast Tiahuanaco-A style pottery in the south. *a*, Pacheco bowl; *b*, Pacheco (?). (Drawn from American Museum of Natural History specimens.)

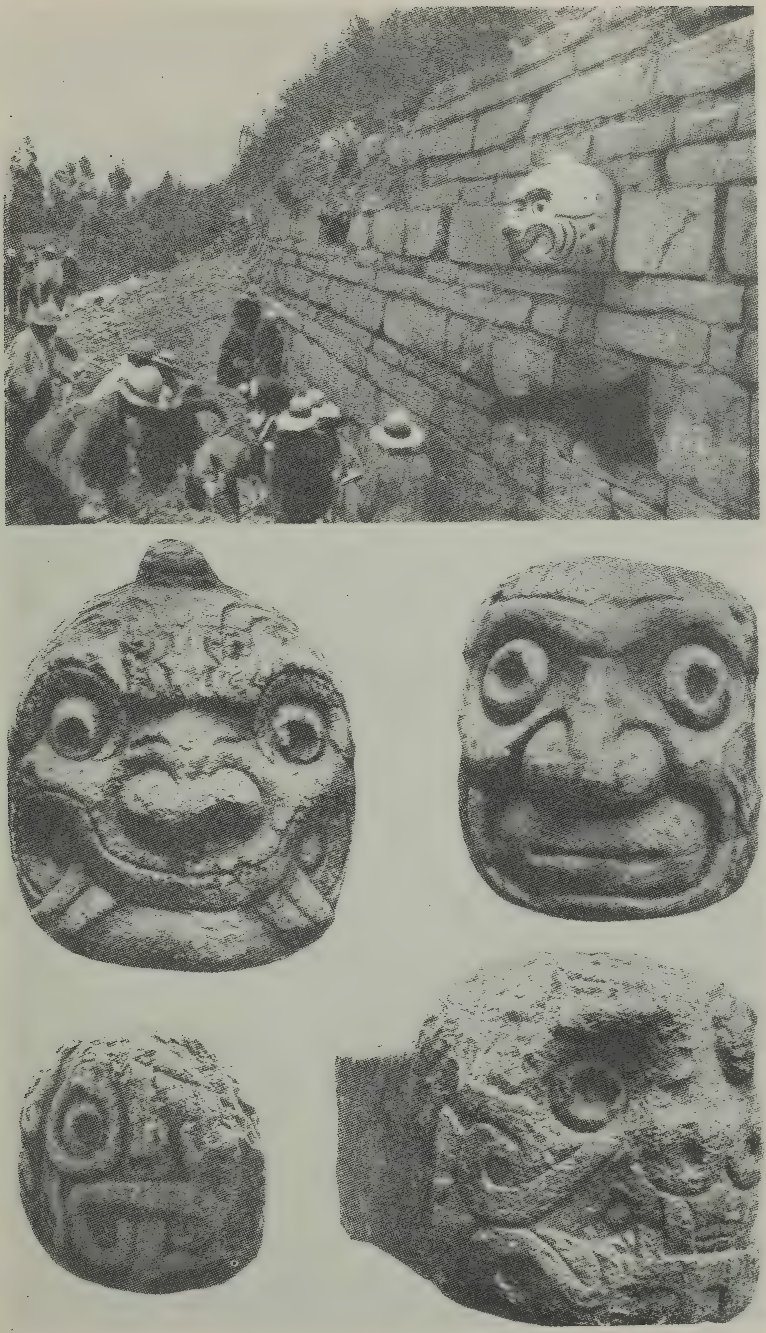


PLATE 17.—**Chavín de Huántar architecture and stone sculpture.** *Top:* West side of Castillo. *Bottom:* Various carved stone heads. (After Tello, 1943, pl. 21.)

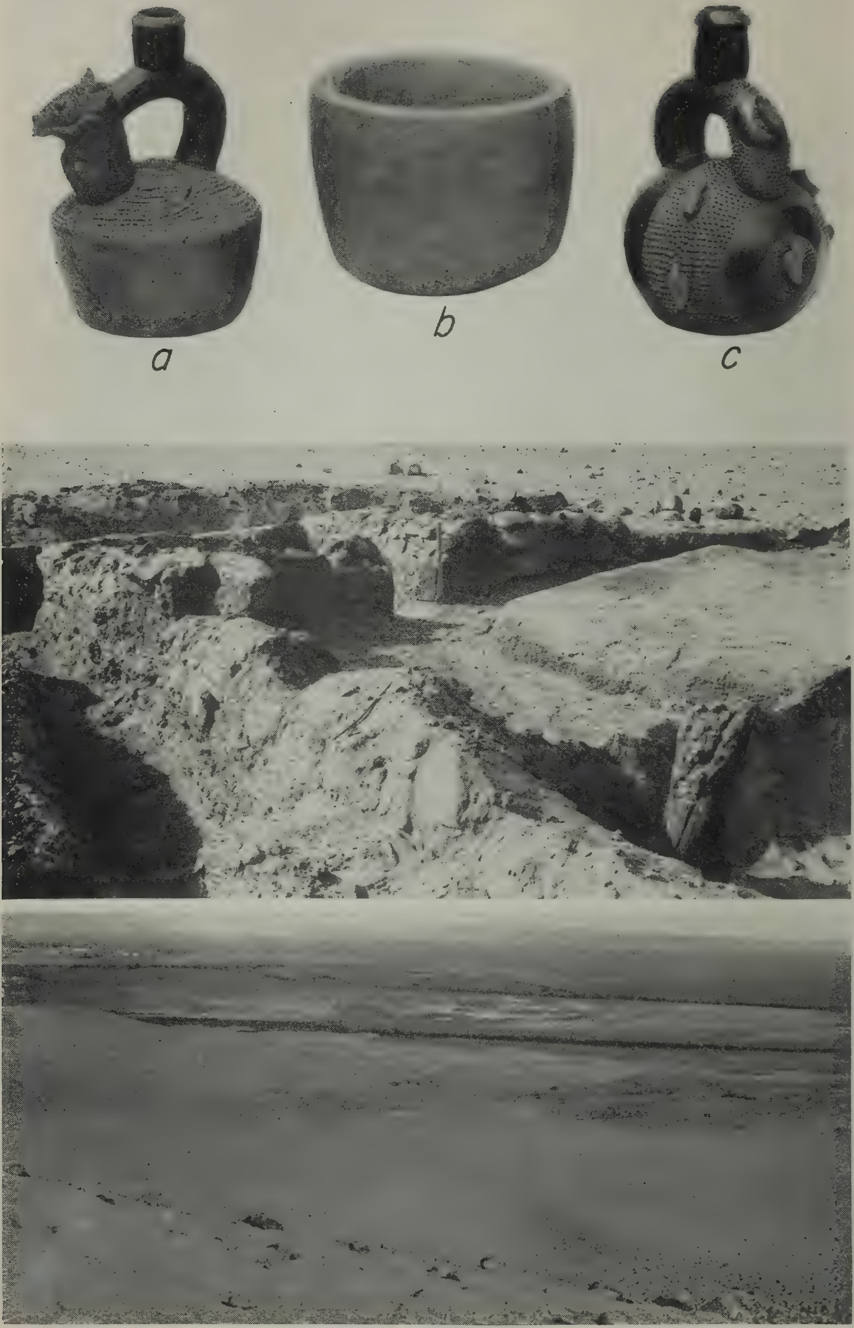


Plate 18.—**Coast Chavín artifacts, structures, and sites.** *Top: a, c,* Coastal Chavín or Cupisnique style vessels from Chongoyape, Lambayeque Valley; *b,* Coastal Chavín stone bowl, same provenience. (Vessels are 8½ inches (21.5 cm.) high.) (Courtesy Museum of the American Indian, Heye Foundation.) *Center:* Structure and altar(?) at Aspero, Puerto Supe. *Bottom:* Aspero site looking toward the valley, ruins of above structure at center of picture. (Courtesy Department of Anthropology, Columbia University.)

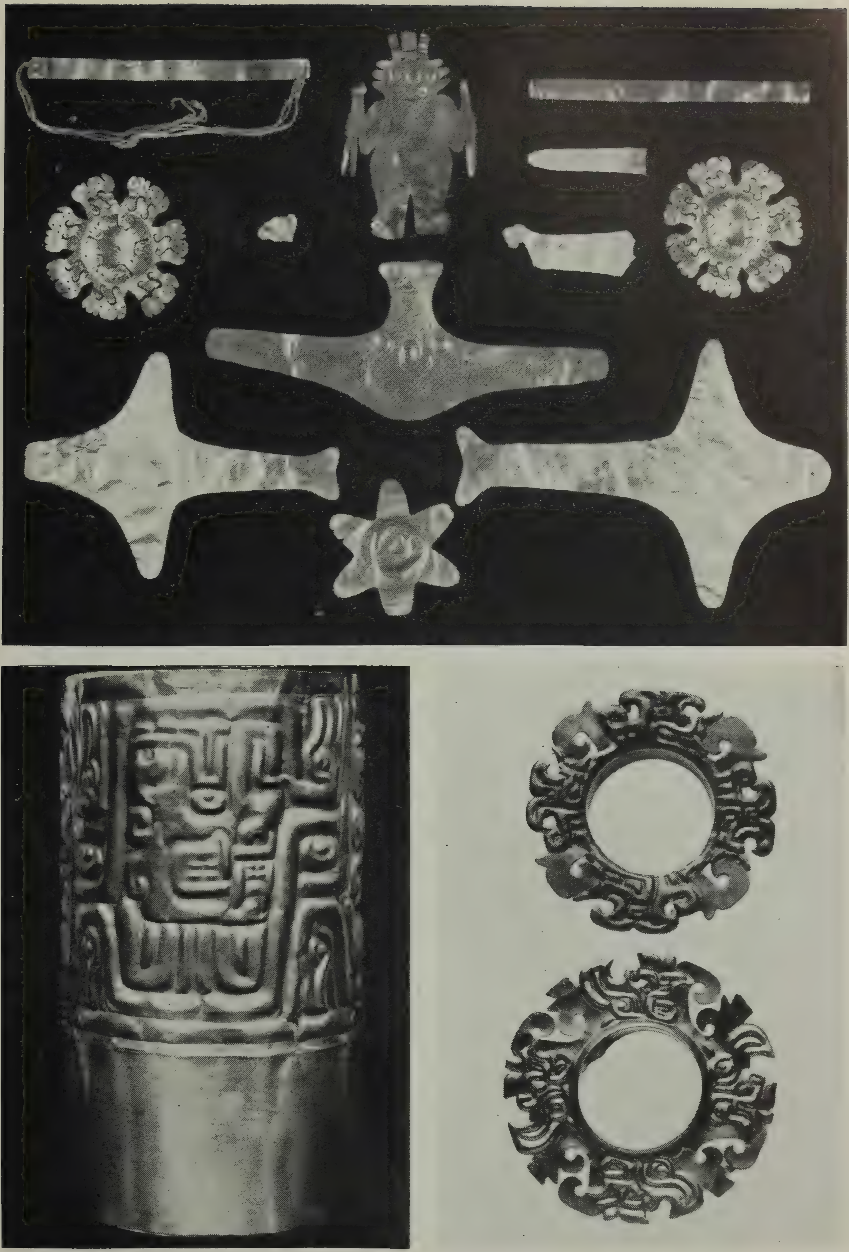


PLATE 19.—**Gold objects of the Chavín and Paracas Necropolis styles.** *Top:* Paracas Necropolis hammered gold ornaments. (Courtesy American Museum of Natural History.) *Bottom (left):* Gold wrist ornament, Chongoyape Chavín style, Lambayeque Valley, Perú. *Bottom (right):* Ear ornaments, Chongoyape Chavín style, Lambayeque Valley, Perú. (Cylinder is 10¾ inches (27 cm.) high; ear ornament is 5⅛ inches (13 cm.) in diameter.) (Courtesy Museum of the American Indian, Heye Foundation.)

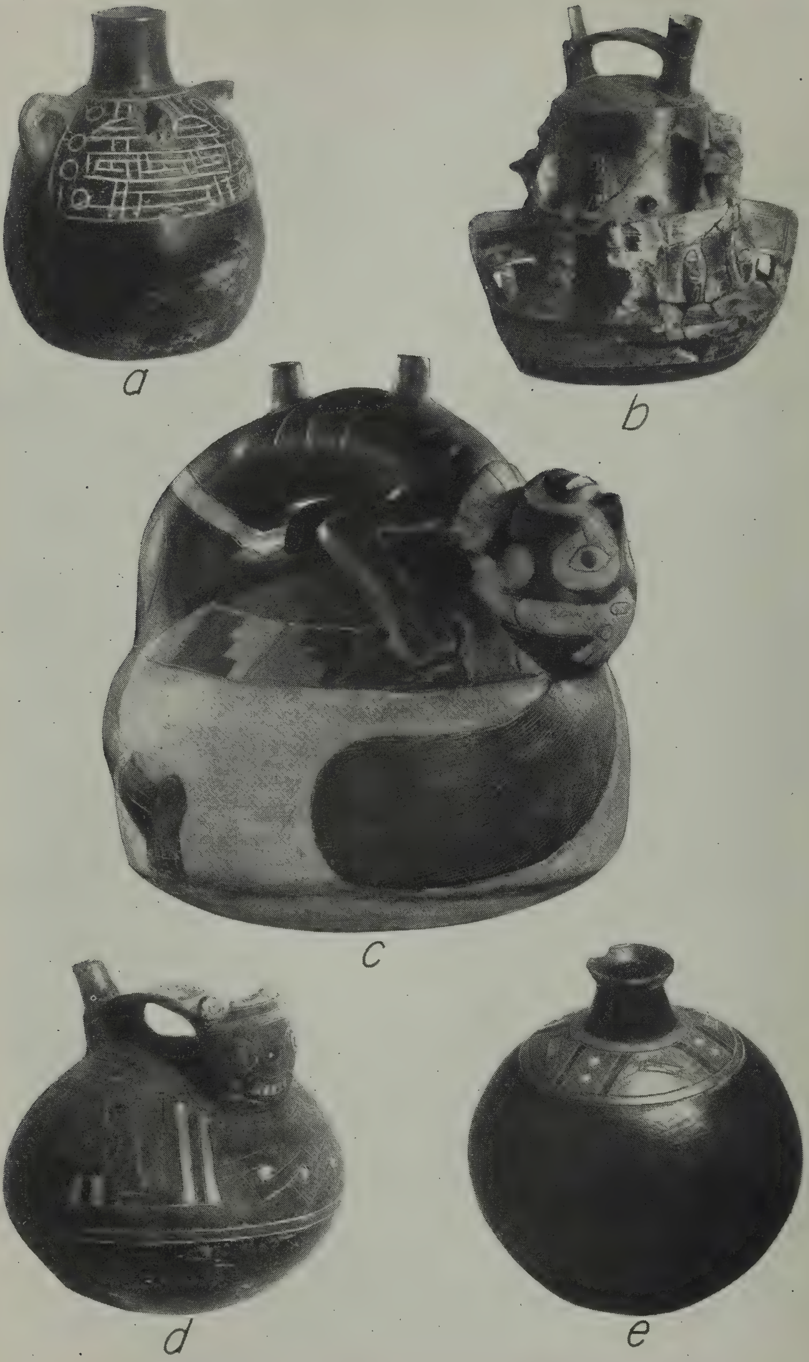


Plate 20.—**Paracas Cavernas style pottery.** (*a*, *b*, *d*, *e*, Courtesy Museo Nacional, Lima; *c*, photo of cast, Courtesy American Museum of Natural History.)

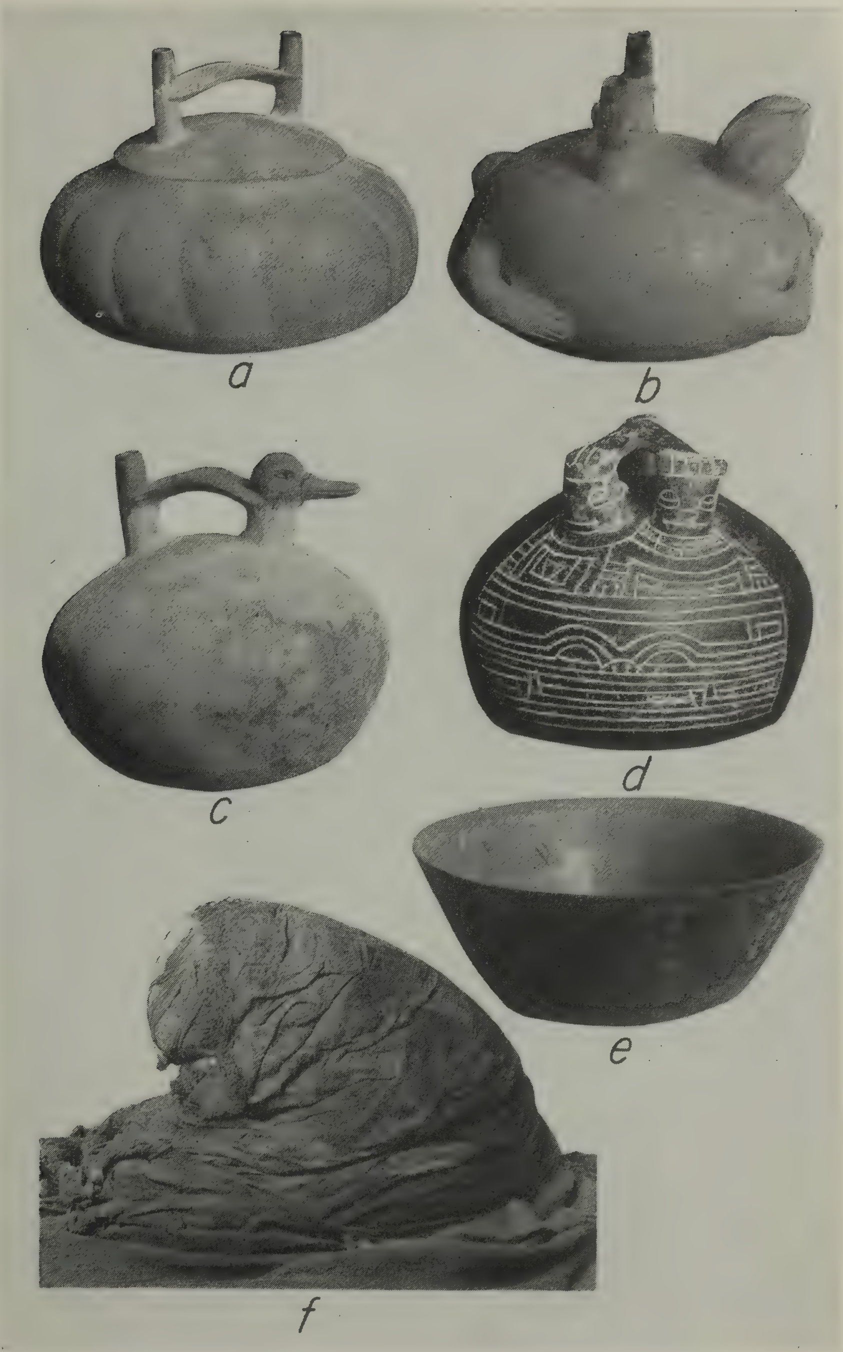


Plate 21.—**Paracas Necropolis and Cavernas style pottery and Necropolis mummy bundle.** *a, b, c,* Necropolis style; *d,* typical Cavernas style; *e,* two-color negative style of Cavernas; *f,* partially unwrapped Necropolis mummy bundle. (*a–e,* Courtesy Museo Nacional, Lima; *f,* Courtesy American Museum of Natural History.)

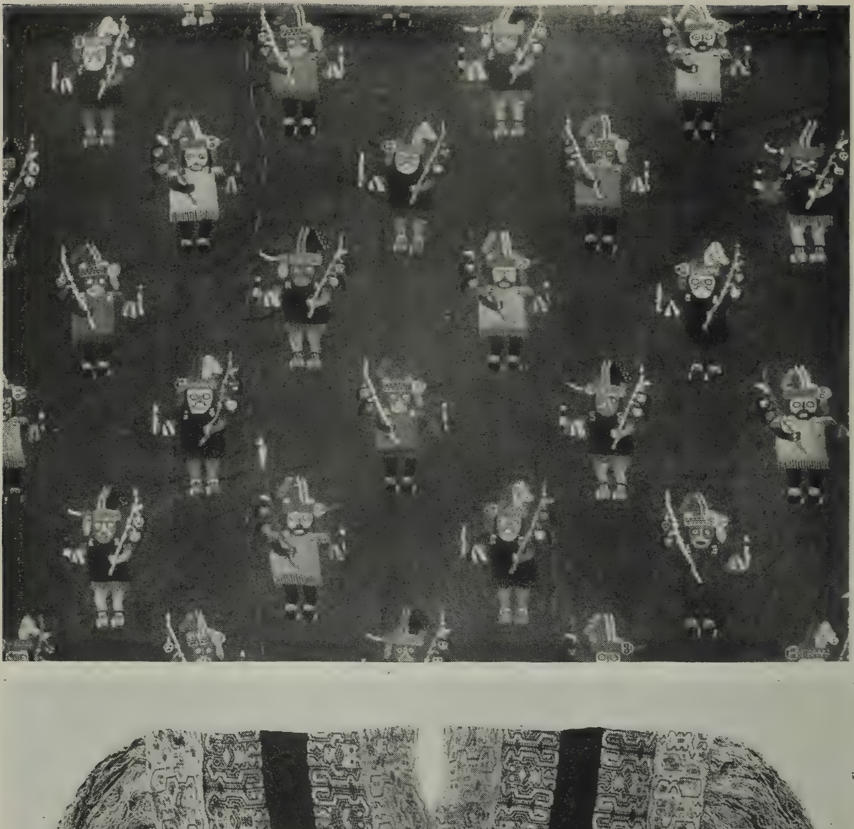
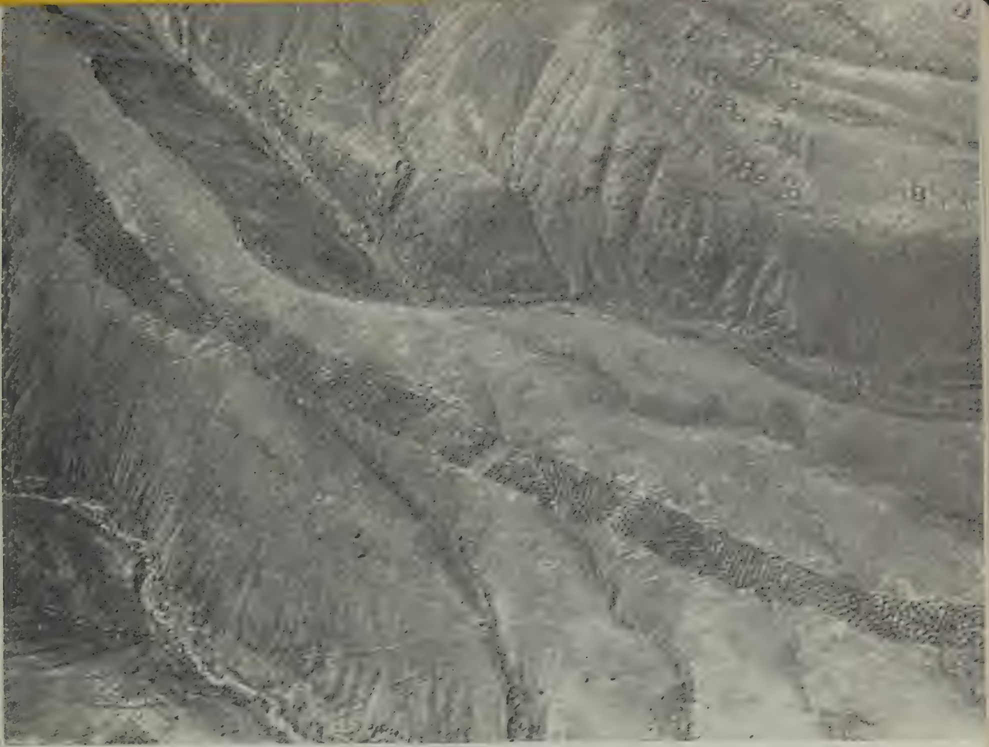


Plate 22.—**Paracas Necropolis textiles.** *Top:* Section of a shawl with polychrome embroidered warriors carrying trophy heads. *Bottom:* Shirt with overall embroidery design. (Courtesy American Museum of Natural History.)



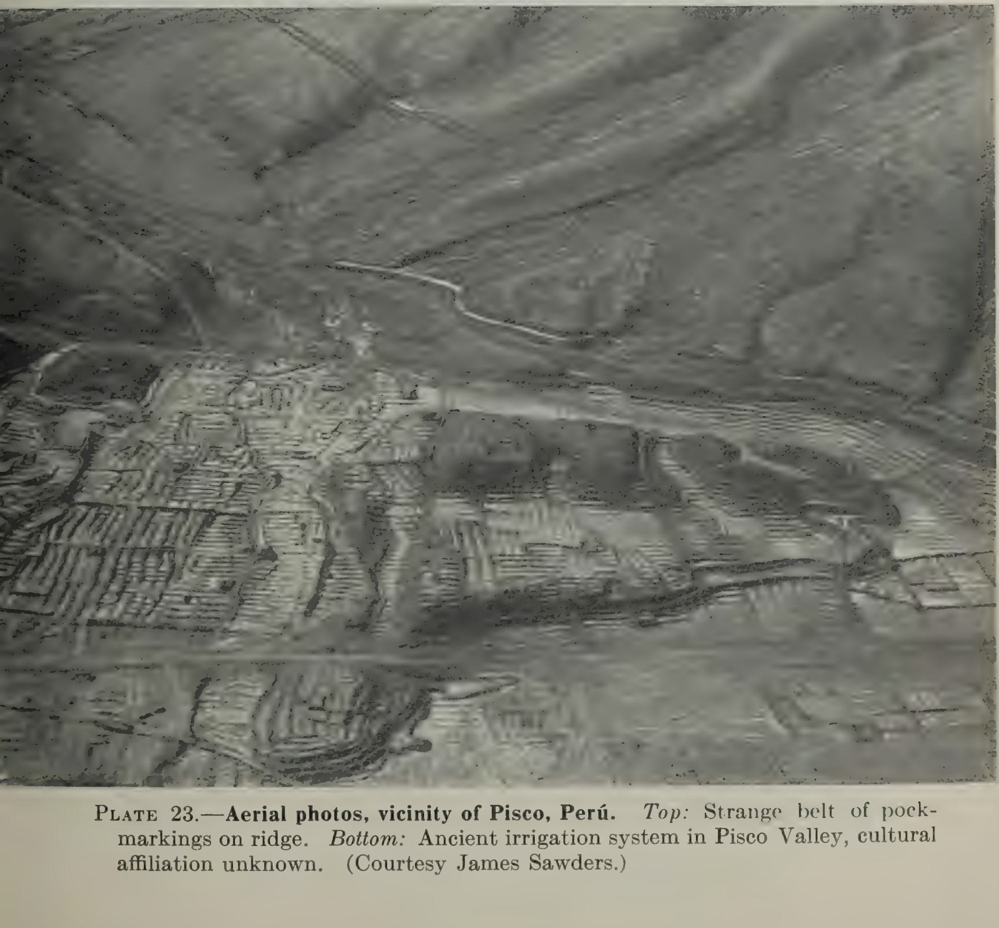


PLATE 23.—Aerial photos, vicinity of Pisco, Perú. *Top:* Strange belt of pock-markings on ridge. *Bottom:* Ancient irrigation system in Pisco Valley, cultural affiliation unknown. (Courtesy James Sawders.)

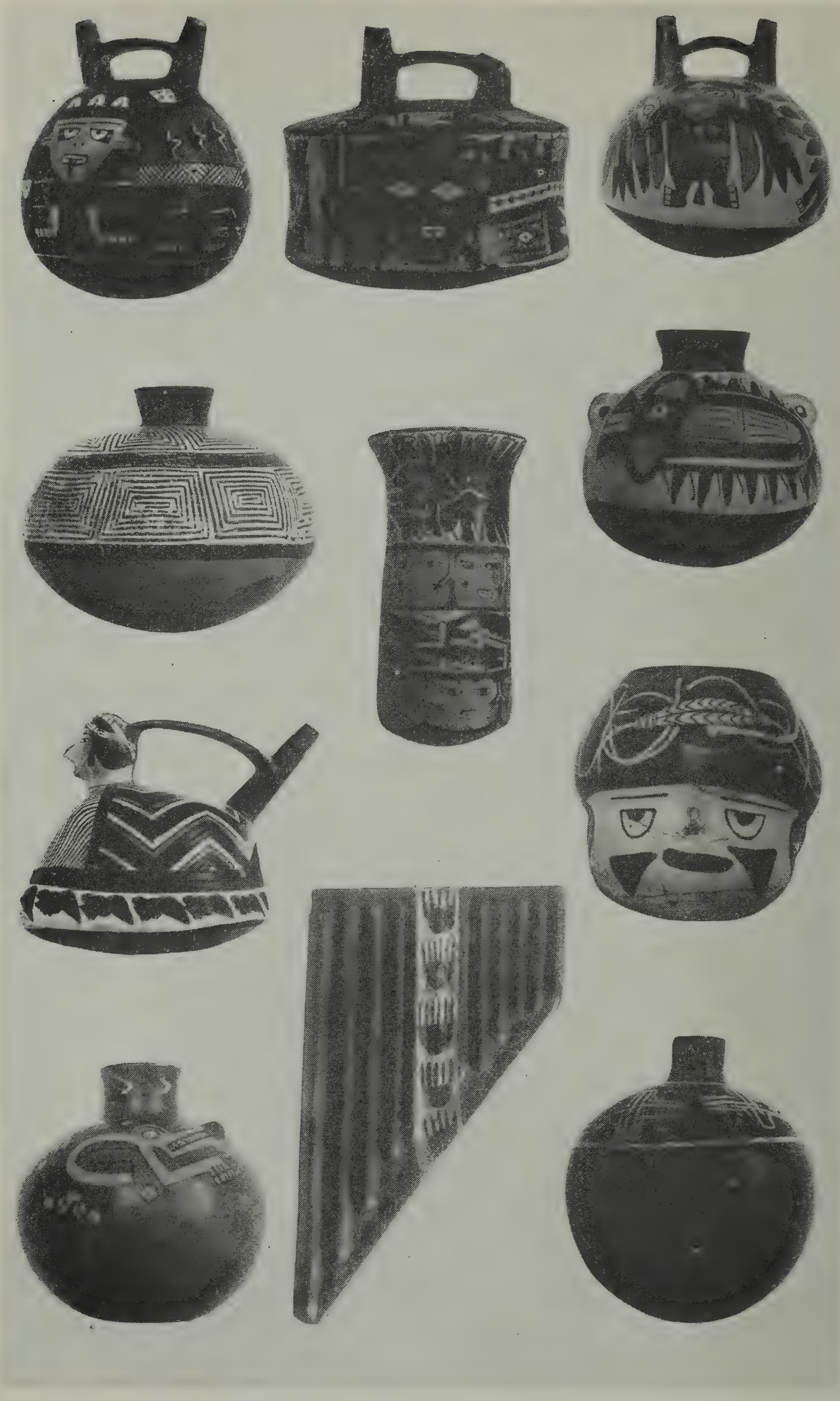


PLATE 24.—**Nazca style pottery.** *Top row,* Nazca A style; *second row,* Nazca X style; *third row,* Nazca B style (this includes tall jar); panpipes, probably Nazca B; *two bottom vessels,* Nazca Y style. All from Nazca Valley except panpipes, which is from Ica Valley. (After Gayton and Kroeber, 1927, pls. 1, 6, 11, 8, 7, 14, 13; panpipes after Kroeber and Strong, 1924, pl. 29.)

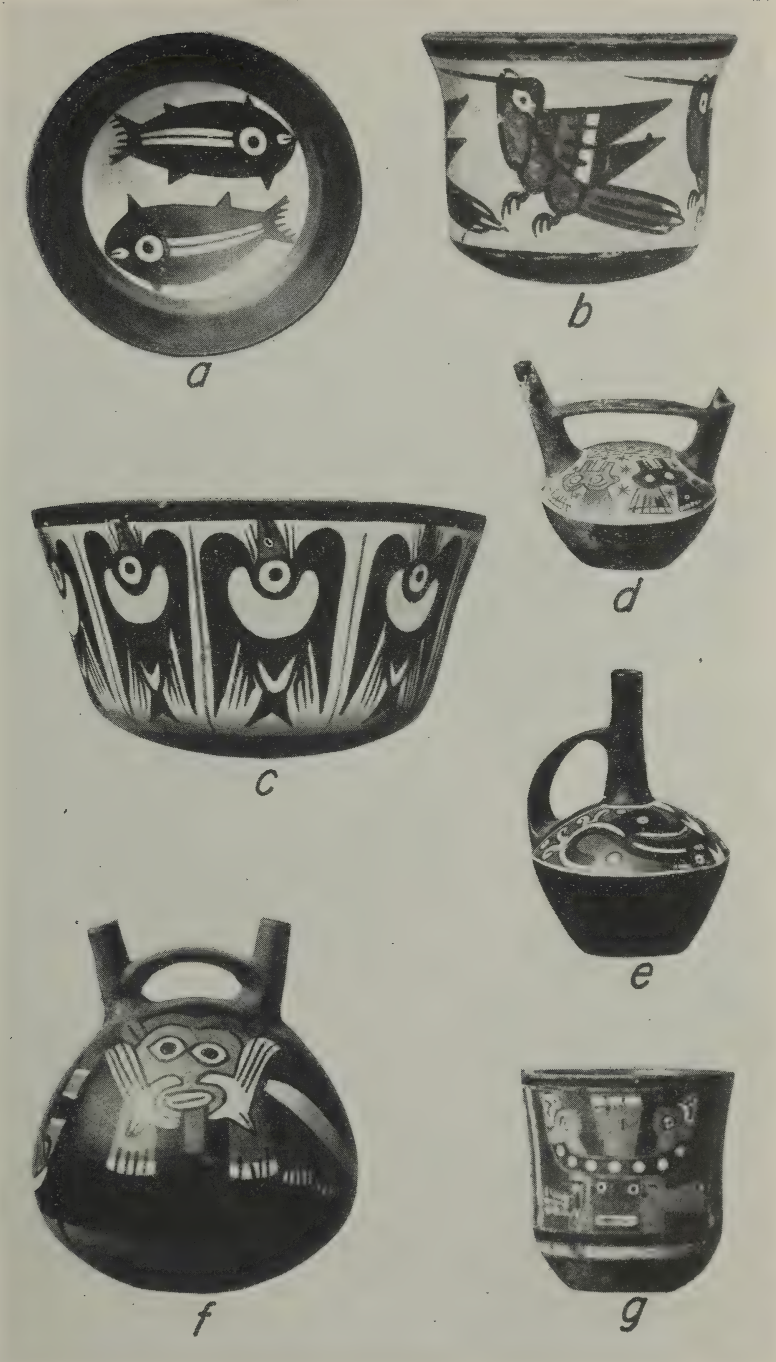


Plate 25.—**Nazca style pottery.** *a–c*, *f*, Nazca A style; *d*, *e*, *g*, Nazca Y or Epigonal (Tiahuanaco influenced) style. (After Schmidt, 1929, pp. 335, 331, 337, 330, 330, 342, 330.)

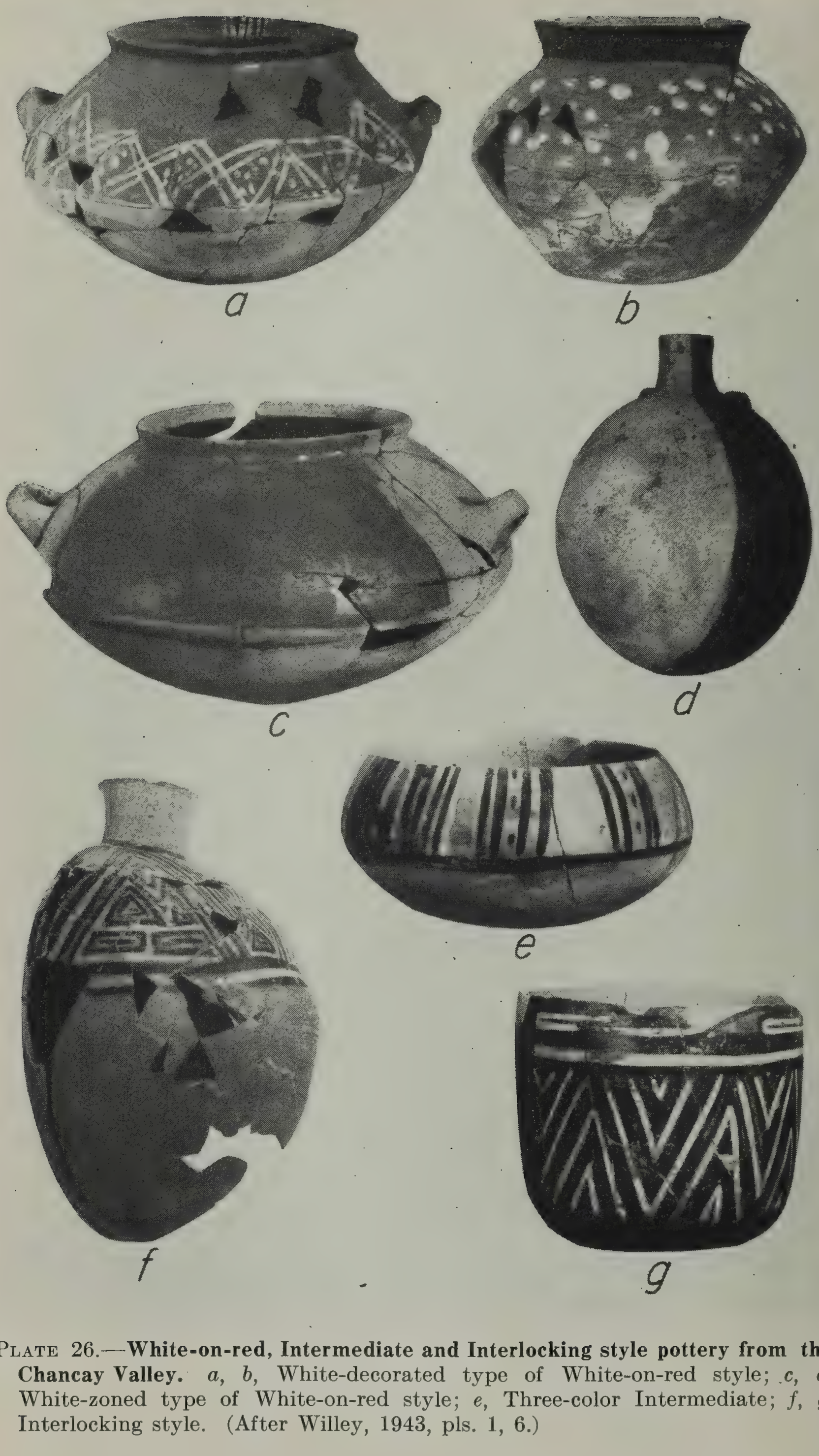


Plate 26.—**White-on-red, Intermediate and Interlocking style pottery from the Chancay Valley.** *a*, *b*, White-decorated type of White-on-red style; *c*, *d*, White-zoned type of White-on-red style; *e*, Three-color Intermediate; *f*, *g*, Interlocking style. (After Willey, 1943, pls. 1, 6.)

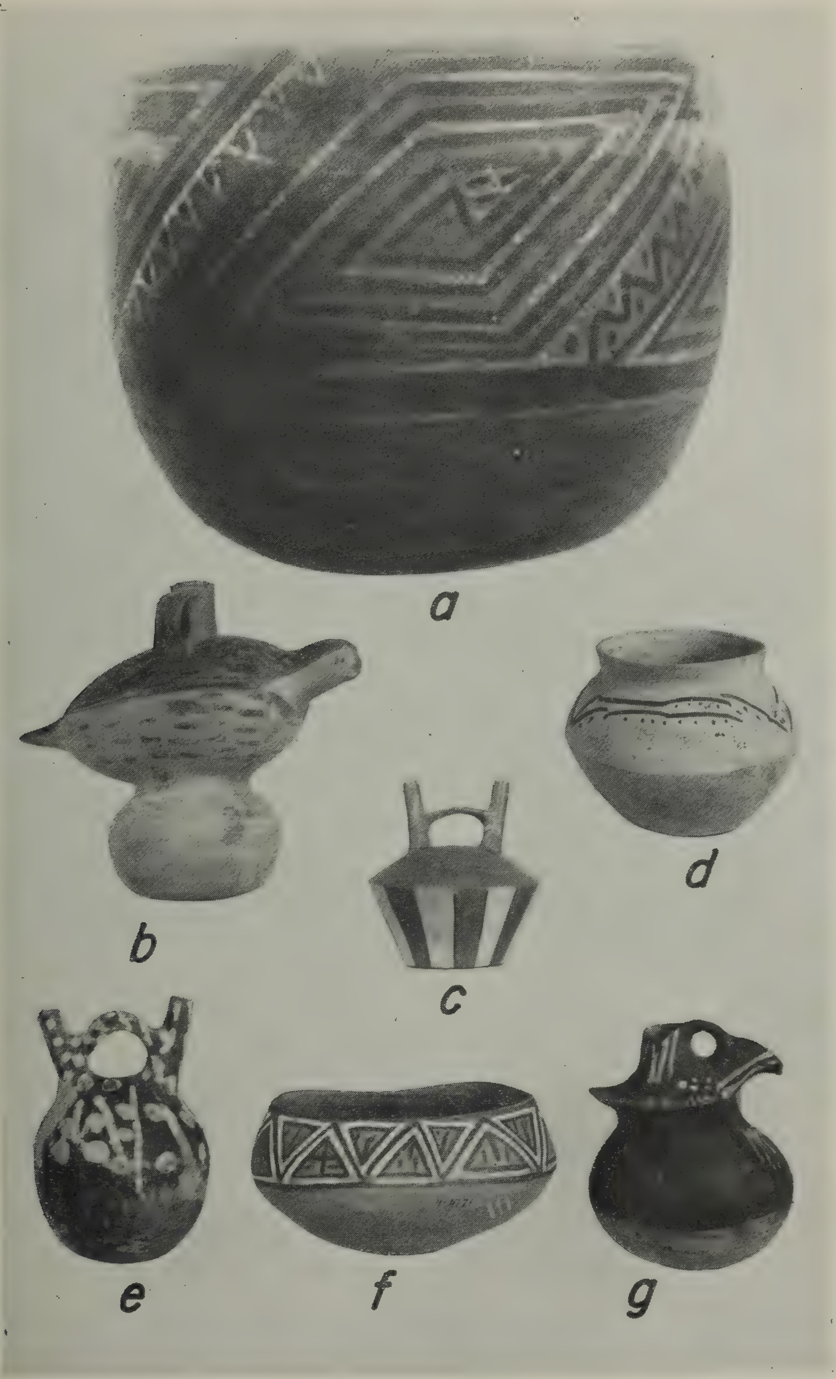


Plate 27.—**Interlocking, White-on-red, and Intermediate style pottery from the Chancay Valley.** *a*, Interlocking; *b–e*, *g*, White-on-red; *f*, three-color Intermediate. (After Kroeber, 1926, pls. 88, 90, 86, 89.)

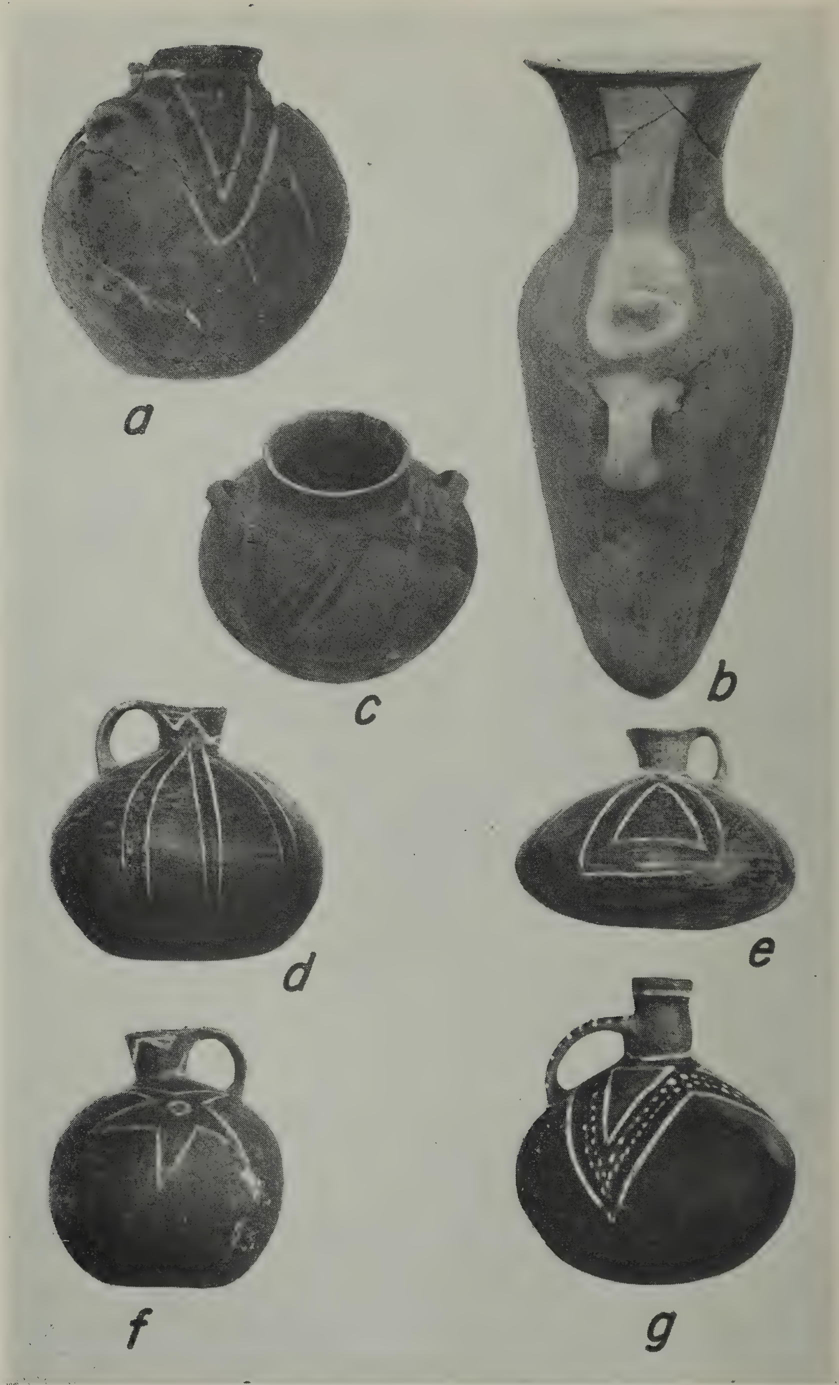


PLATE 28.—**Pachacamac Interlocking and coarser class of Early Lima style (Nievería).** *a–c*, Interlocking vessels. (After Strong and Corbett, 1943, pl. 4.) *d–g*, Early Lima vessels. (After Gayton, 1927, pl. 93.)

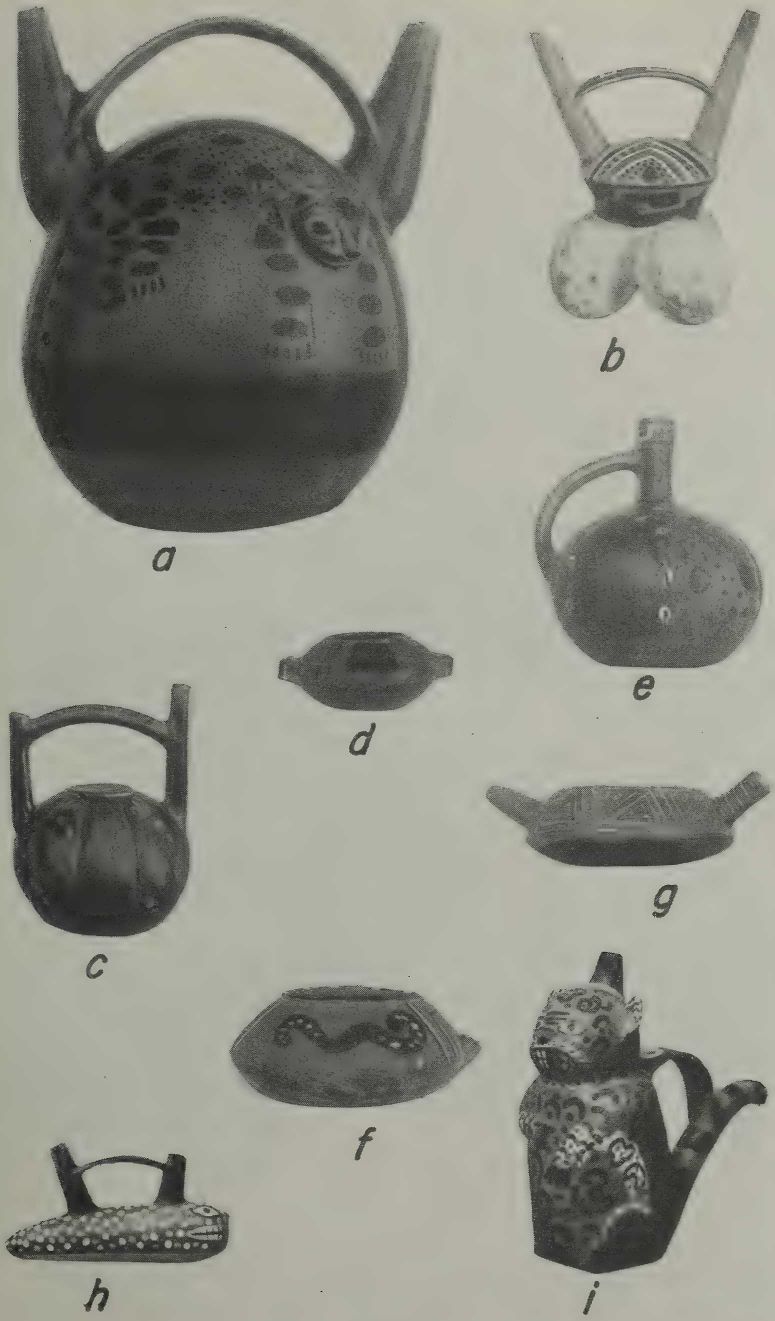


Plate 29.—**Finer class of Early Lima style pottery from Nievería and Pachacamac.** *b*, *g*, Most suggestive of Interlocking; *h*, *i*, Coast Tiahuanaco influenced. (After Gayton, 1927, pls. 91, 94, 95; *h*, *i*, after Schmidt, 1929, pp. 273, 272.)

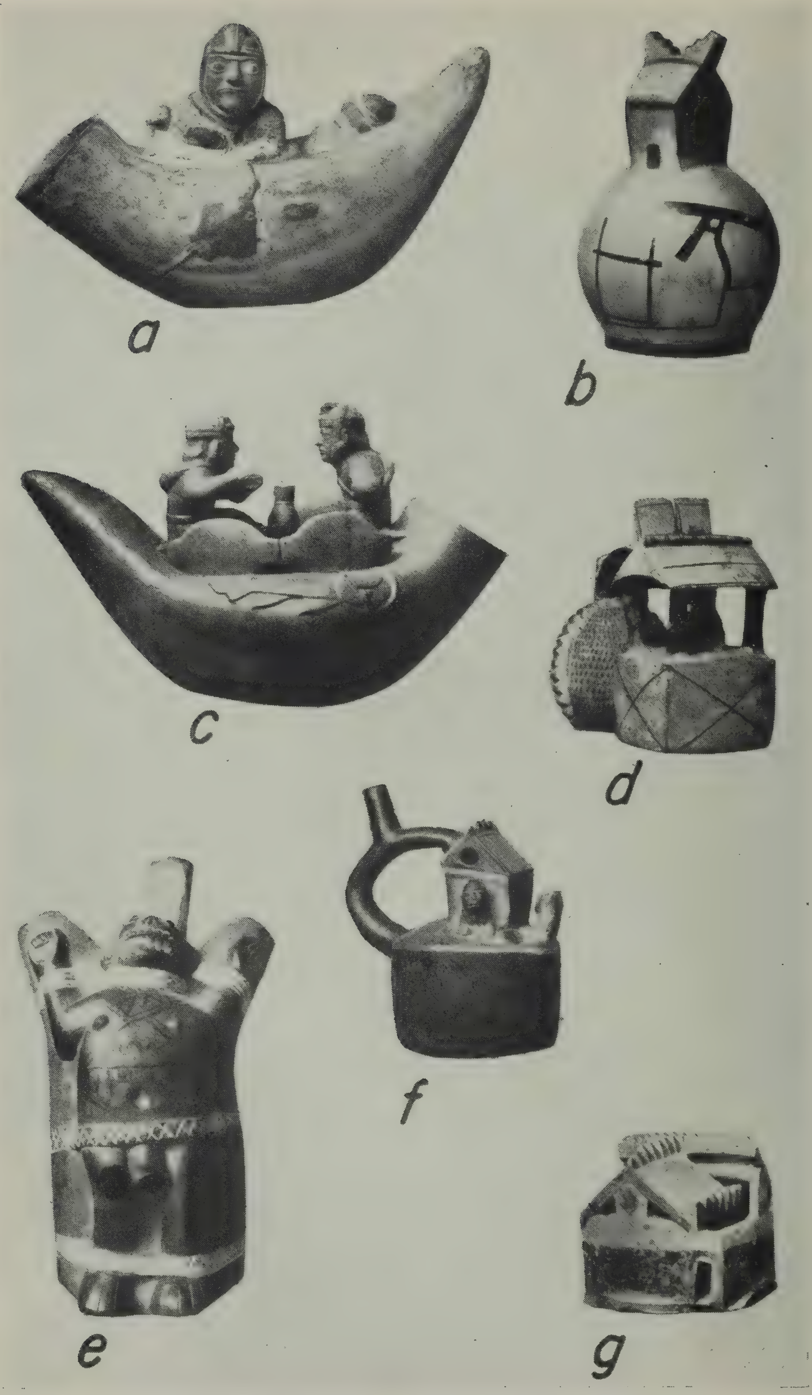


PLATE 30.—**Cultural representations in Mochica and Chimu pottery.** *a*, *c*, Fishing from balsas; *b*, *d*, *f*, *g*, house types; *e*, torture to death. Proveniences as follows: *a*, Unknown; *b*, *c*, Chimbote; *d–f*, Trujillo; *g*, Chicama Valley. *d* is Middle or Late Chimu; others are Mochica. (After Schmidt, 1929, pp. 155, 157, 156, 153.)

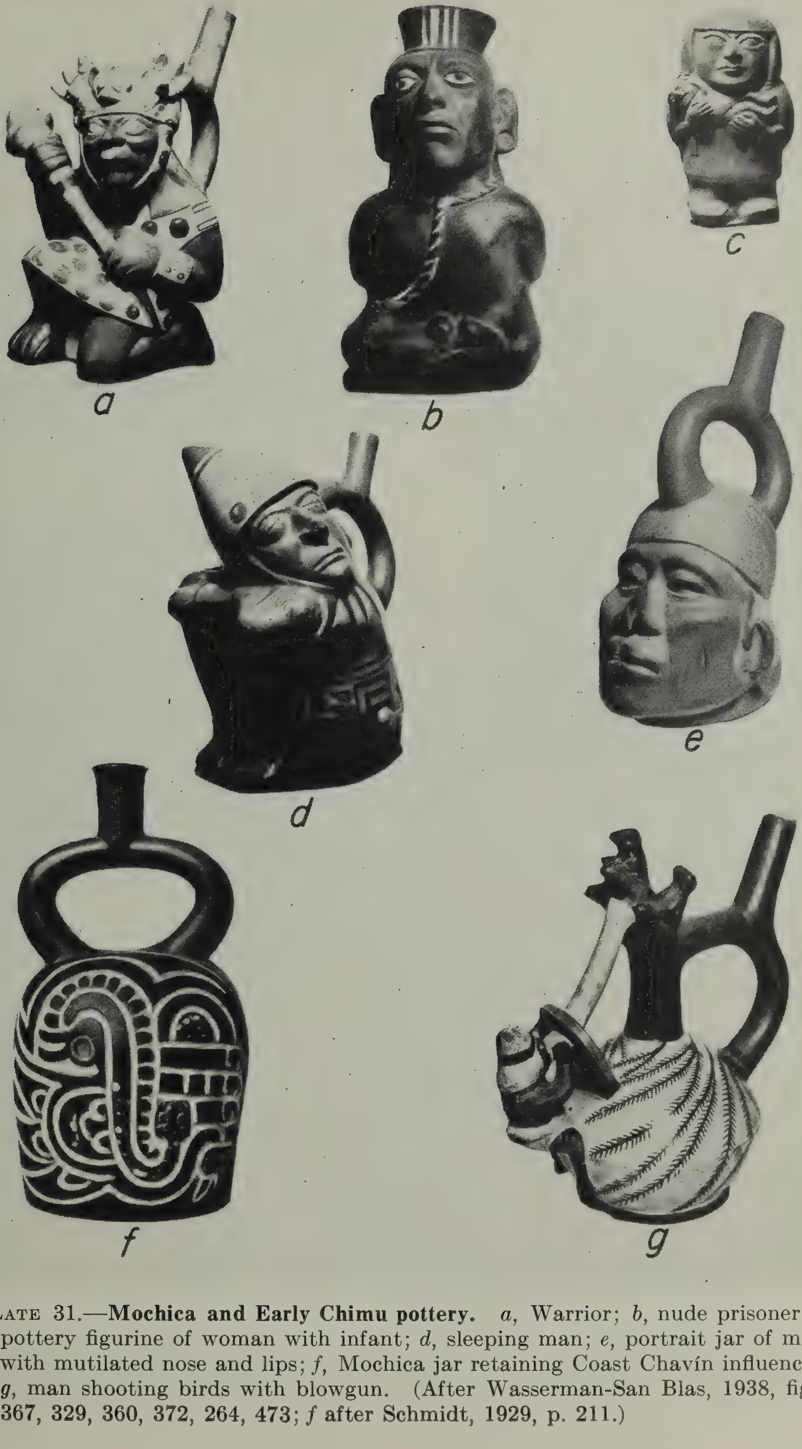


Plate 31.—**Mochica and Early Chimu pottery.** *a*, Warrior; *b*, nude prisoner; *c* pottery figurine of woman with infant; *d*, sleeping man; *e*, portrait jar of man with mutilated nose and lips; *f*, Mochica jar retaining Coast Chavín influence;, *g*, man shooting birds with blowgun. (After Wasserman-San Blas, 1938, figs. 367, 329, 360, 372, 264, 473; *f* after Schmidt, 1929, p. 211.)

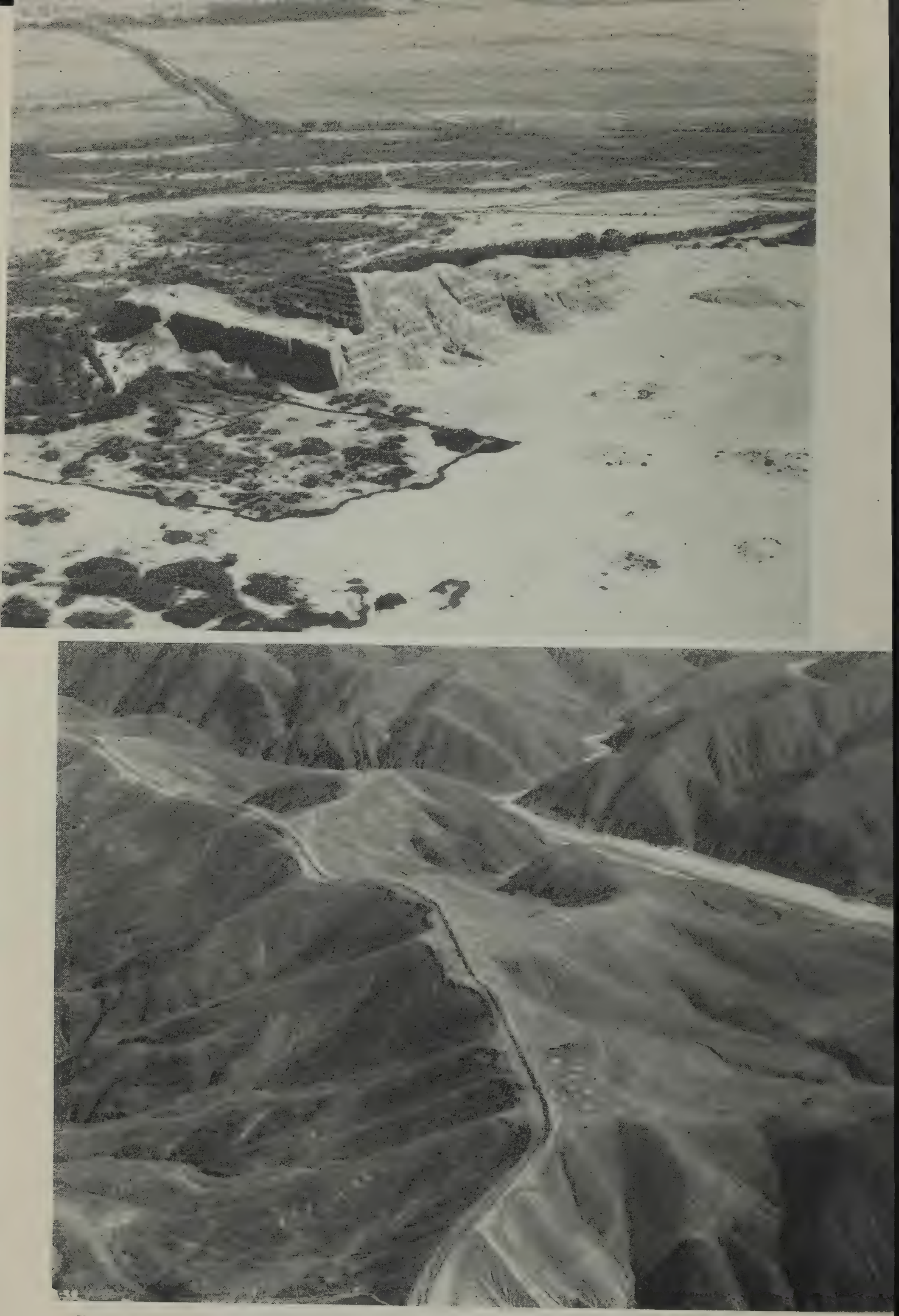


Plate 32.—**Archeological structures of the North Peruvian Coast.** *Top:* The Temple of the Sun at Moche, a Mochica pyramid. *Bottom:* Great wall of Santa Valley, cultural or period association uncertain. (Courtesy James Sawders.)

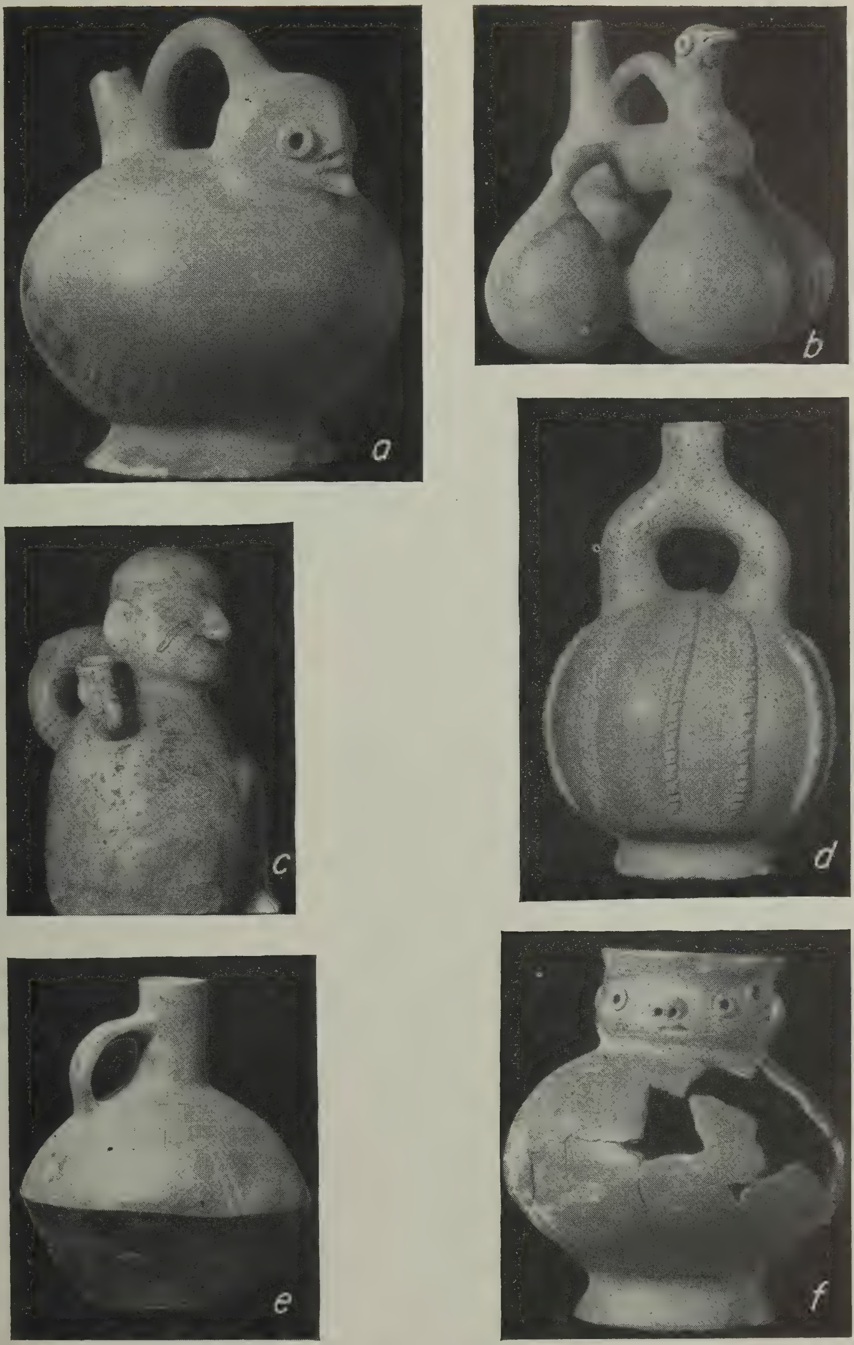


Plate 33.—**Gallinazo Plain and Two-color Negative from Virú Valley Cemetery.** *a–c*, *e*, Negative; *d*, *f*, Plain. (After Bennett, 1939, fig. 13.)

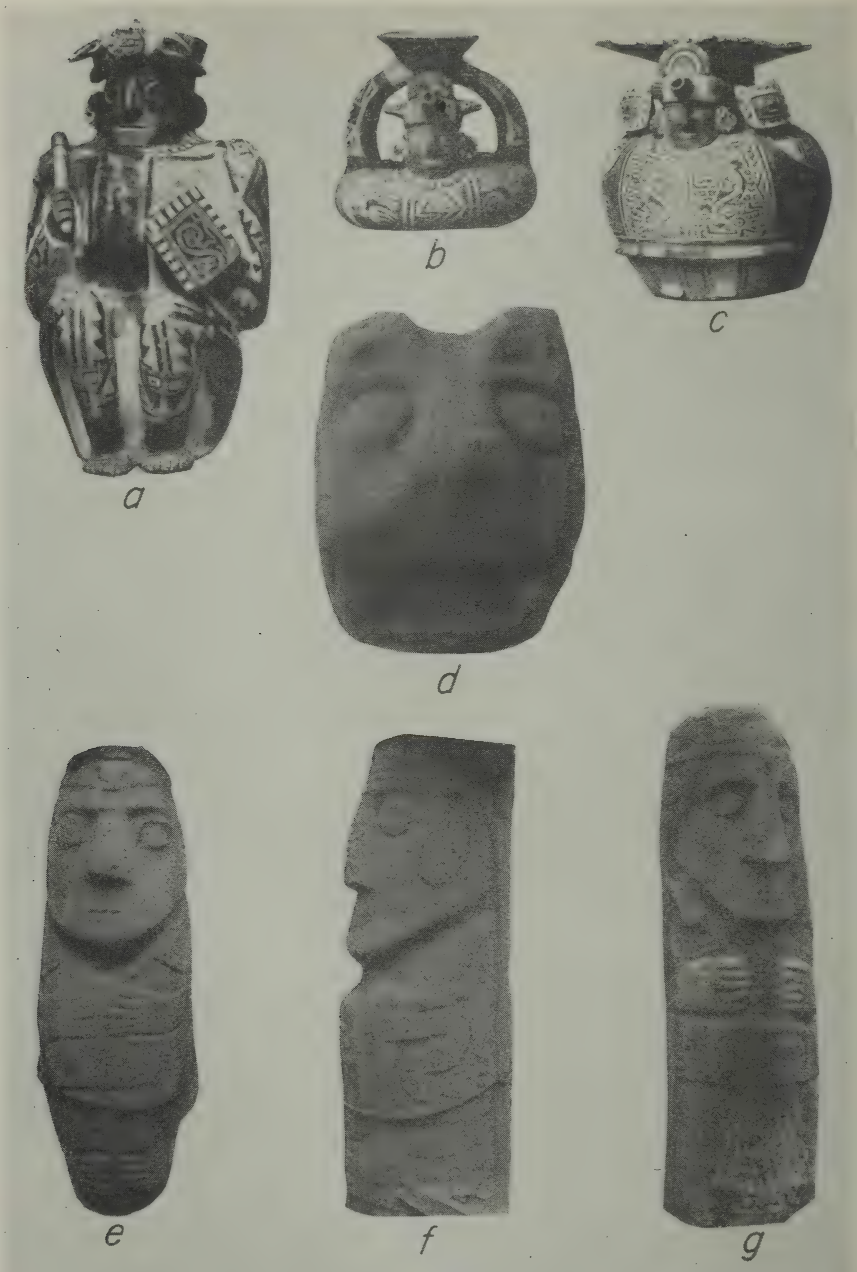


PLATE 34.—**Recuay pottery and stone sculpture from the Callejón de Huaylas.** *a–c,* Recuay Three-color negative style. (After Schmidt, 1929, pp. 241, 235, 232.) *d–g,* Stone sculptures from the vicinity of Aija, Ancash. (Courtesy Donald Collier.)

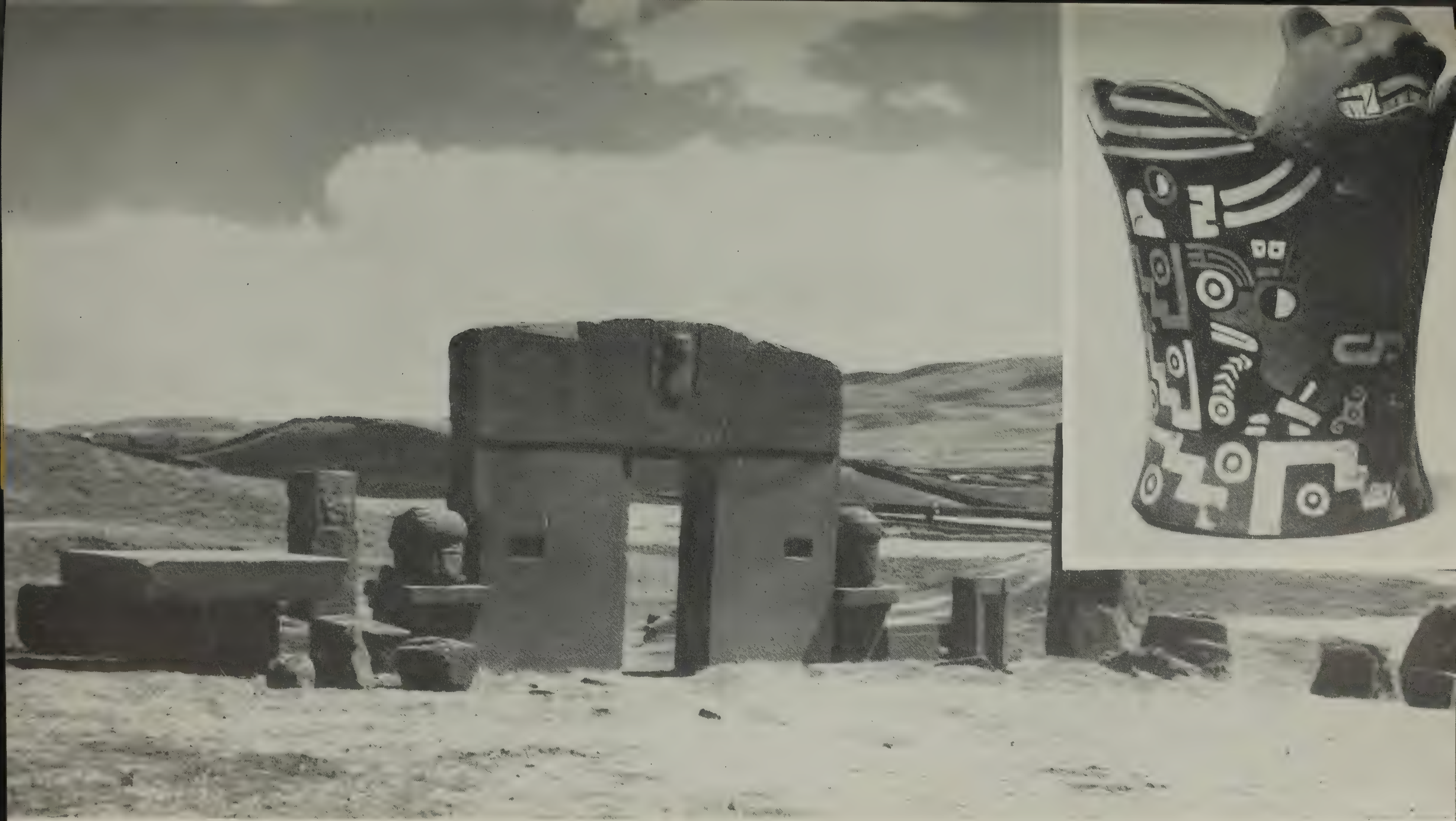


Plate 35.—**Tiahuanaco, Bolivia.** Gateway of the Sun. (Courtesy James Sawders.) *Upper right:* Classic Tiahuanaco beaker. (After Schmidt, 1929, p. 359.)

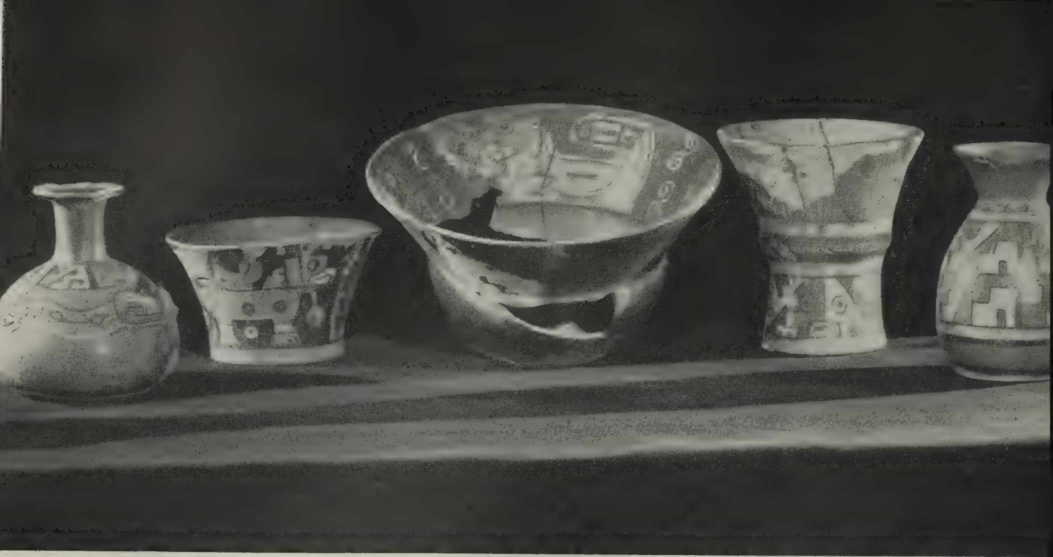
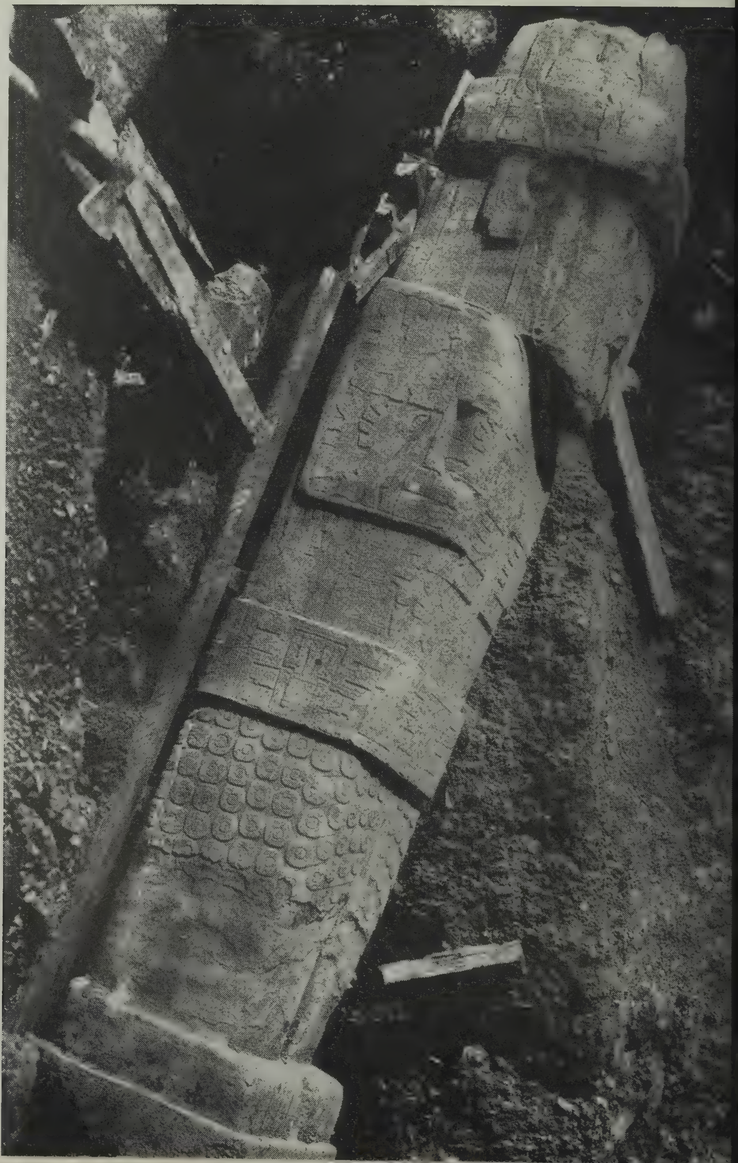


PLATE 36.—Tiahuanaco, Bolivia. *Top:* Classic Tiahuanaco pottery. (Courtesy American Museum of Natural History.) *Right:* Carved Classic Period monolith. (Courtesy Grace Line.)



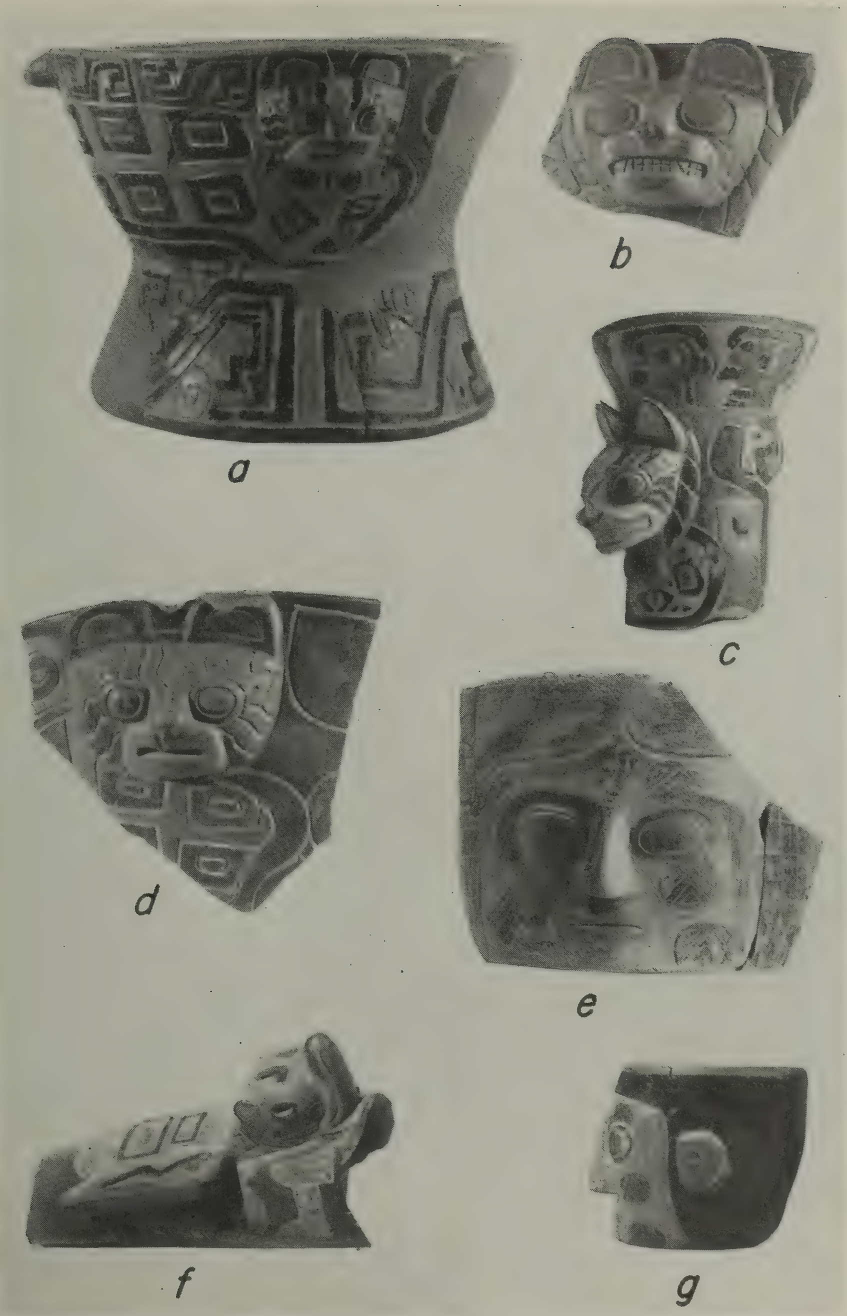


PLATE 37.—**Pucara style pottery.** *a*, Hollow-based bowl; *b*, *d*, sherds with cats' heads; *c*, *f*, fragments of pottery tubes; *e*, *g*, anthropomorphic head vessels. (Courtesy Peabody Museum, Harvard University; *c*, *f*, Museo Nacional, Lima.)

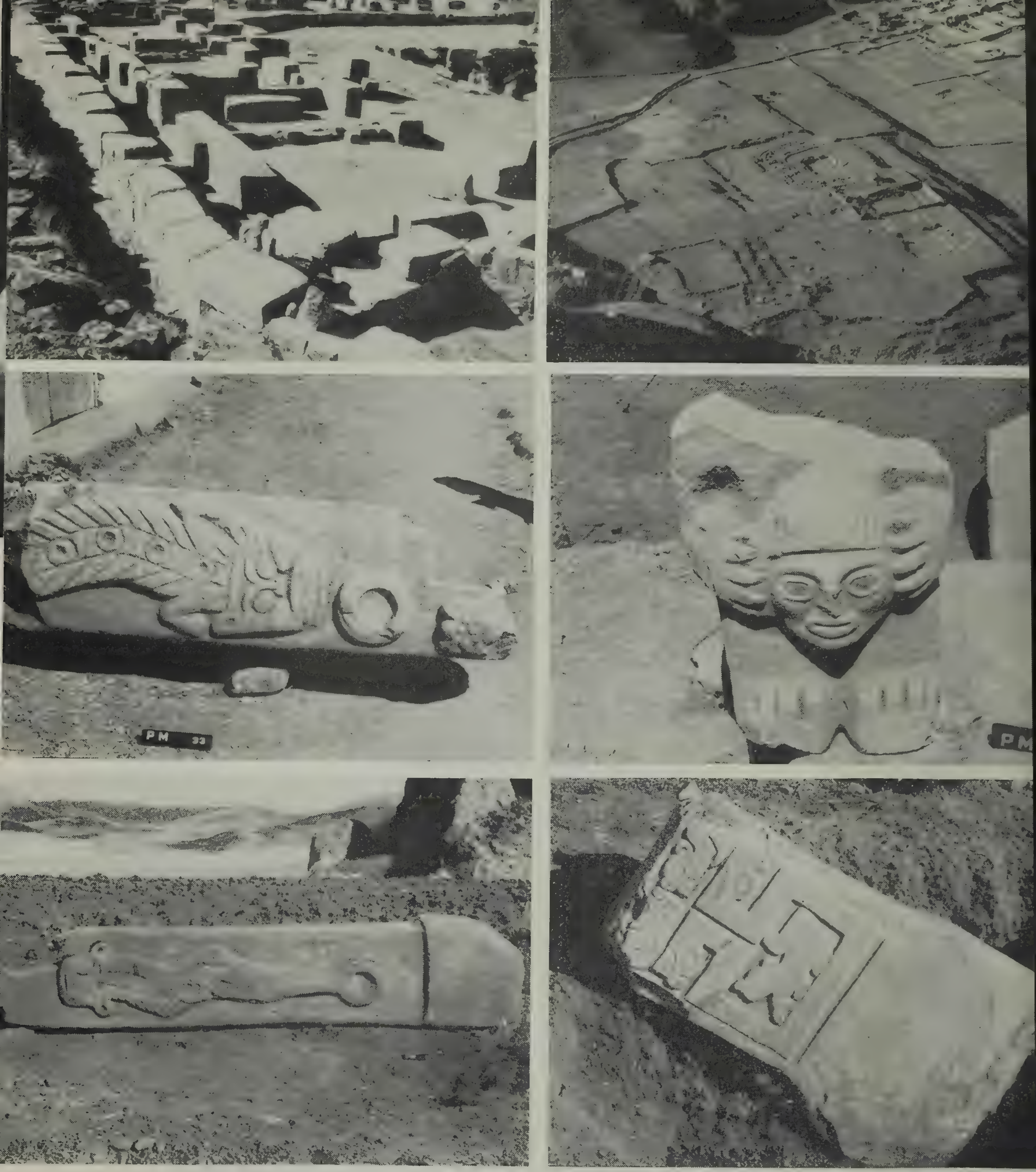


PLATE 38.—**Pucara architectural features and stone sculpture.** *Top (left):* Detailed view of Temple. *Top (right):* General view of the site. *Center and bottom:* Pucara style stone sculpture. (Courtesy Peabody Museum, Harvard University.)

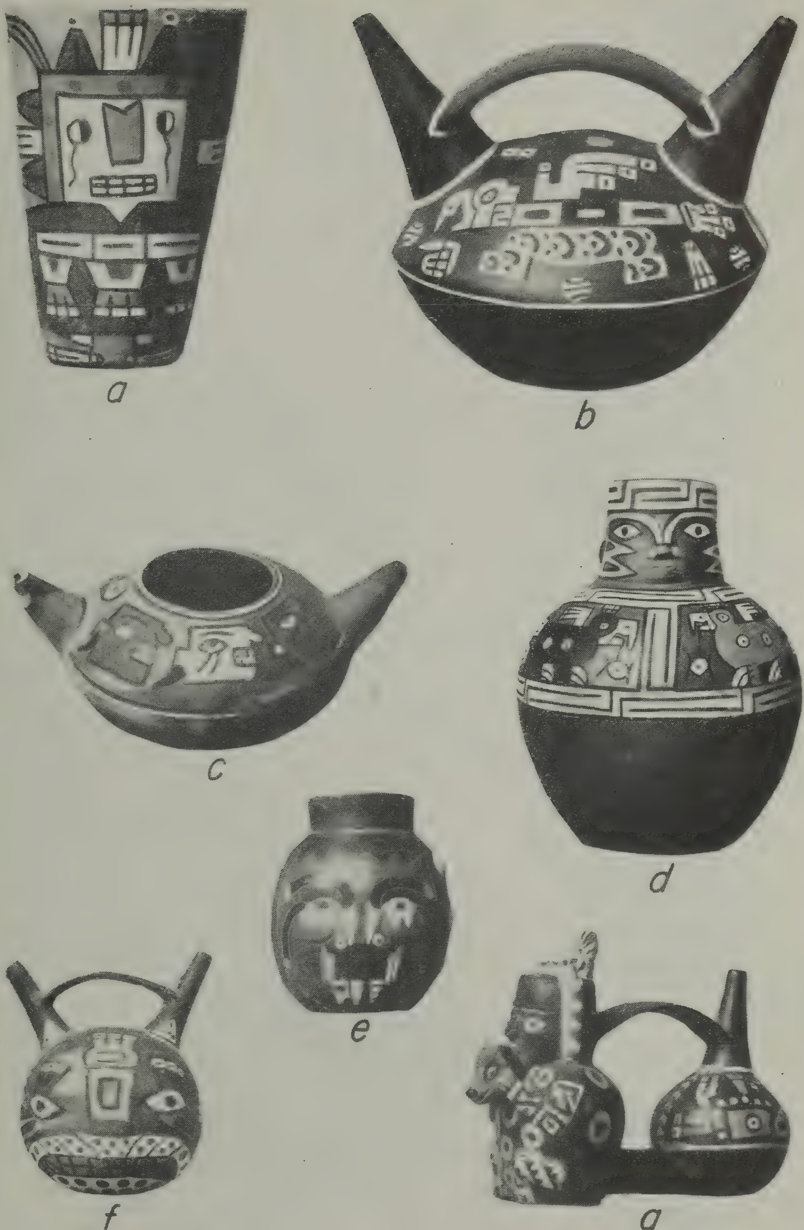


PLATE 39.—**Coast Tiahuanaco-A style from Pachacamac.** (After Schmidt, 1929, pp. 295, 285, 283, 276, 271.)

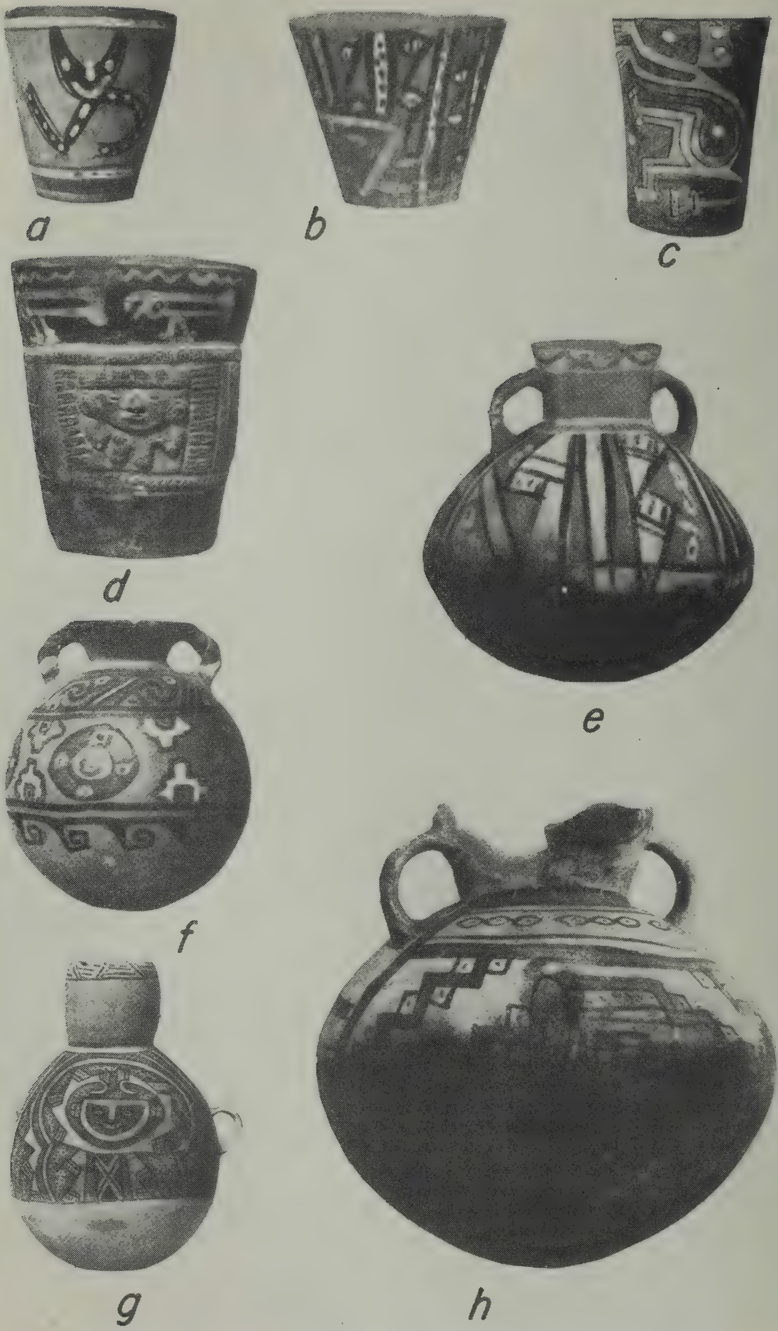


Plate 40.—**Coast Tiahuanaco-A and -B styles from the Central Coast.** *a–c*, Post-Epigone beakers; *d*, Middle Period pressed ware from Huacho; *e*, *h*, Black, white, red geometric styles from Ancón; *f*, *g*, Epigonal and Black-white-red Geometric styles from Huacho. (After Schmidt, 1929, pp. 296, 228, 229; *b*, *e*, *h*, after Willey, 1943, pl. 1.)

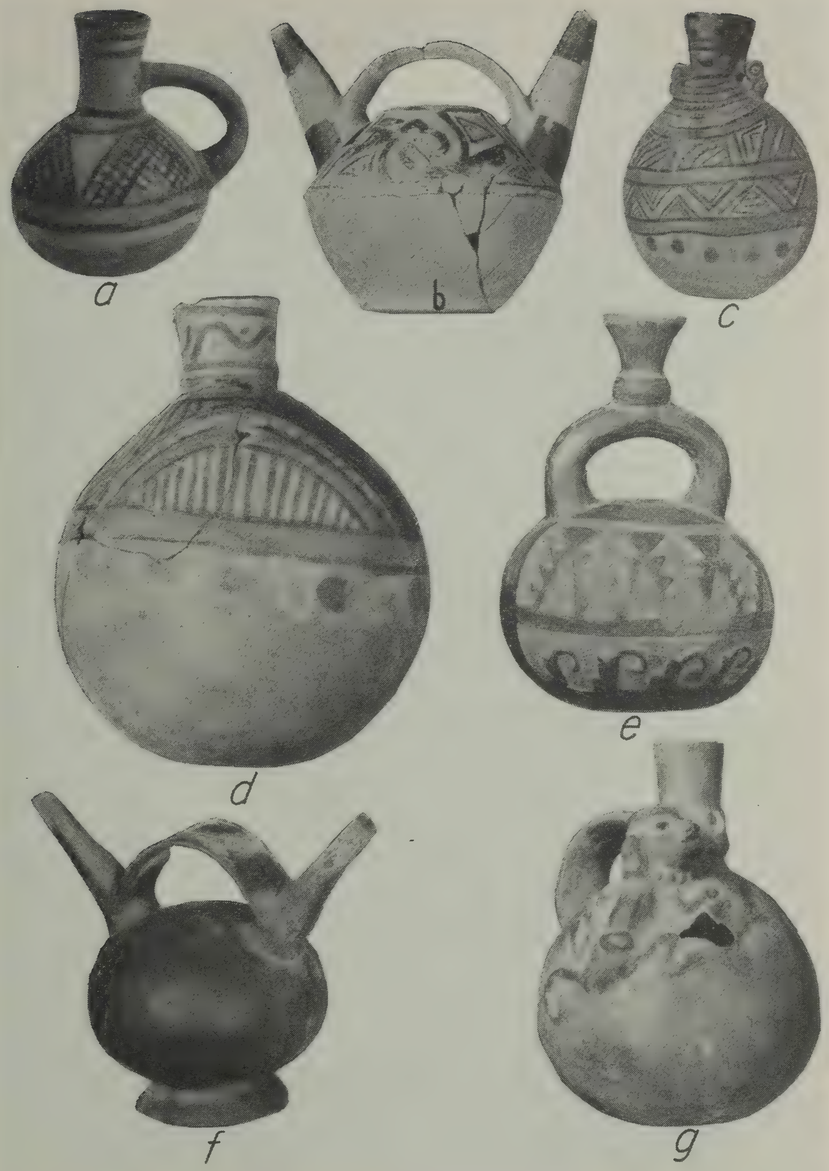


Plate 41.—**Black-white-and-red and black ware styles of the North Coast Middle Periods.** From Huaca de la Cruz and Taitacantín. *a–d*, Black-white-and-red; *e–g*, Black ware. (After Bennett, 1939, figs. 9, 10.)

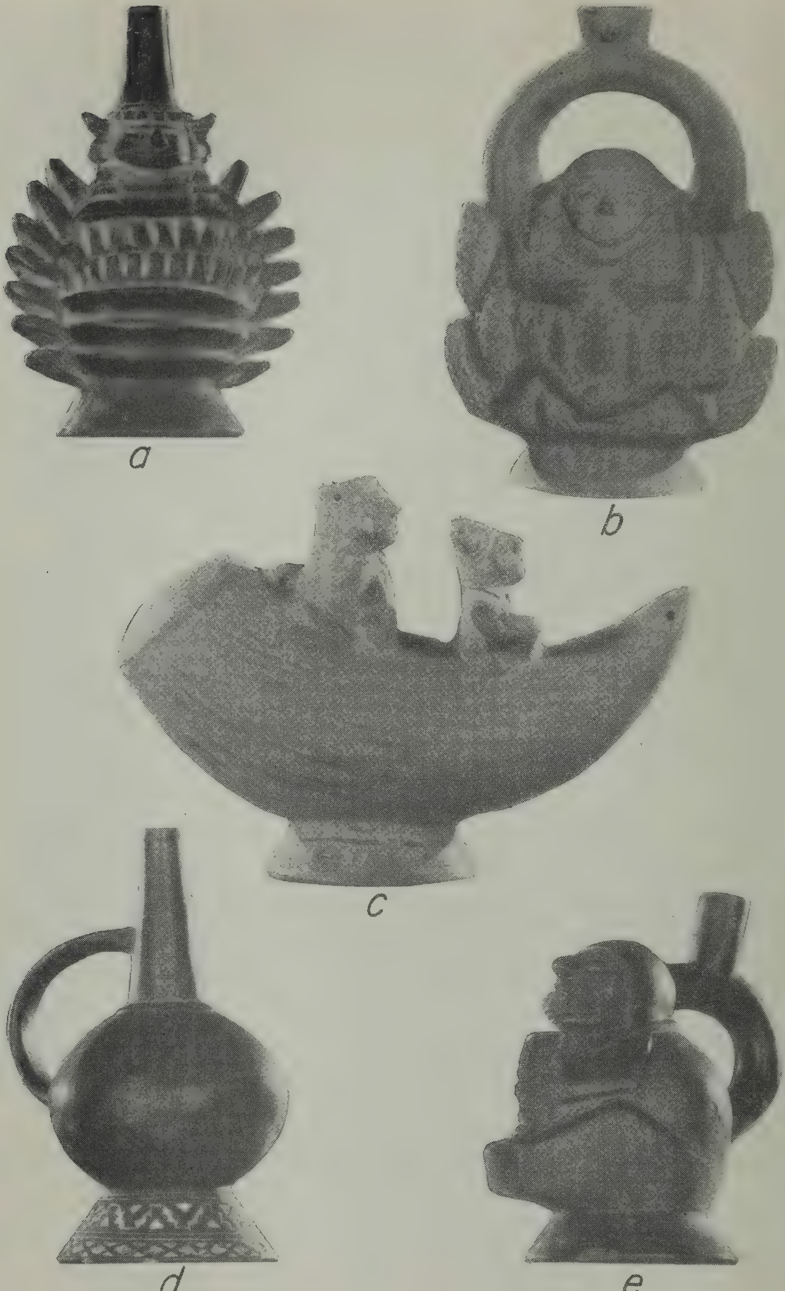


Plate 42.—**Pottery from a Lambayeque site.** A style intermediate between the Middle Periods and Late Chimu. *a*, *d*, *e*, Black ware; *b*, *c*, Orange and Black-and-orange. (After Bennett, 1939, figs. 19, 20.)

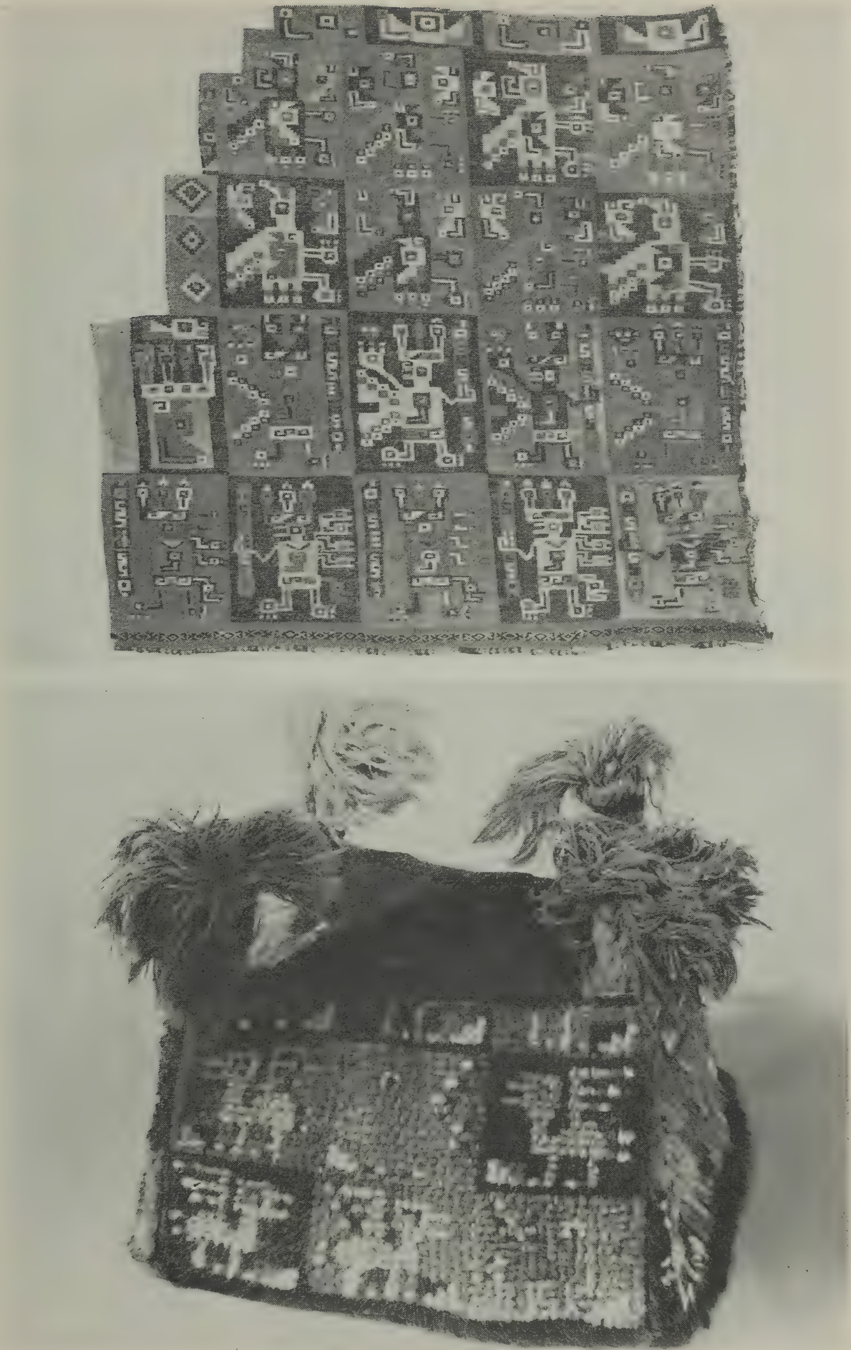


Plate 43.—**Textiles in the Coast Tiahuanaco style.** *Top:* Fragment of an embroidered garment. *Bottom:* A hat in velvet technique. (Courtesy John Wise, New York.)

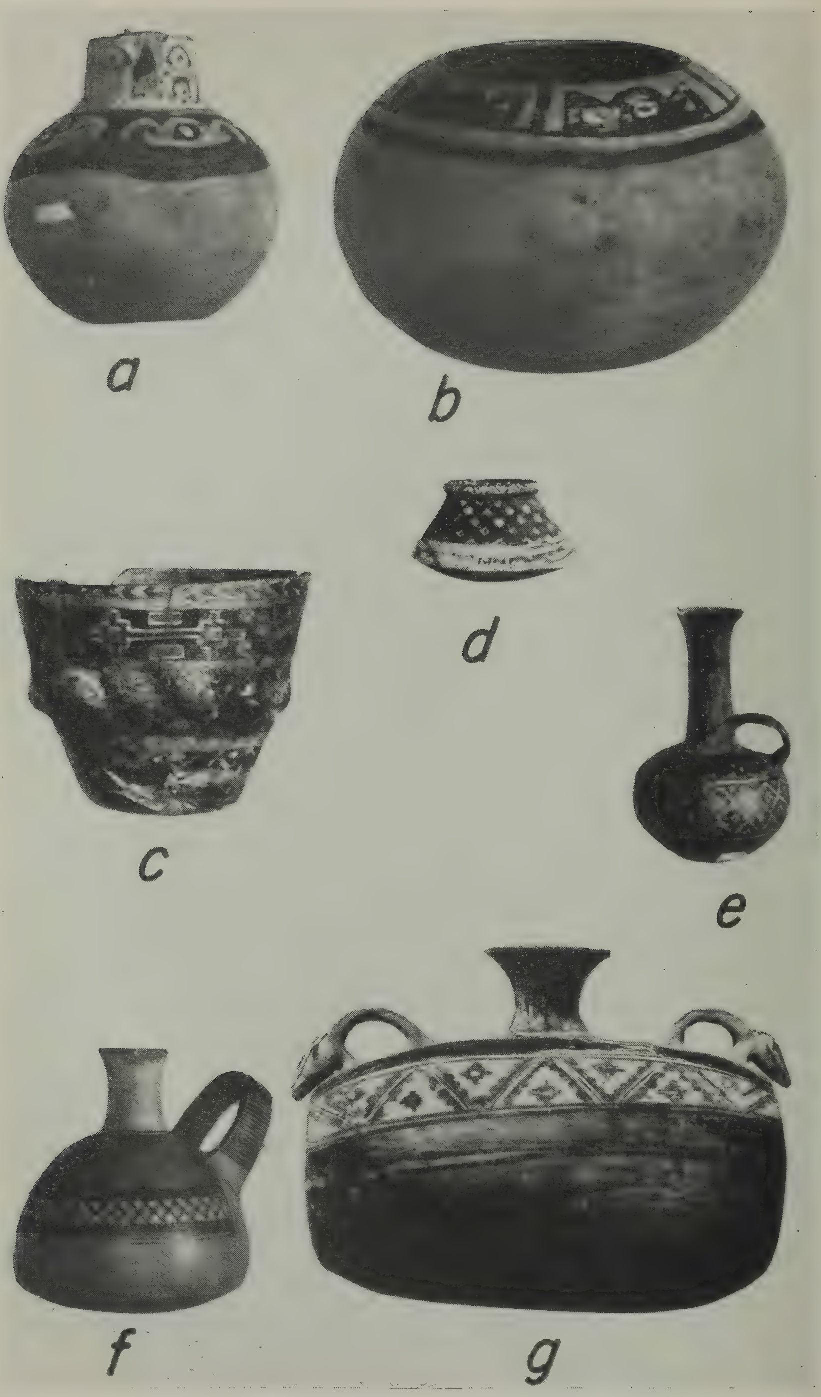


Plate 44.—**Early Ica, Middle Ica, Late Ica, and Coastal *Inca* pottery styles.** *a*, *b*, Ica Epigonal or Early Ica; *c*, Middle Ica I; *d*, *e*, Late Ica I; *f*, *Inca; g*, Late Ica II. (After Kroeber and Strong, 1924, pls. 30, 31, 36, 40; *g*, after Schmidt, 1929, p. 305.)

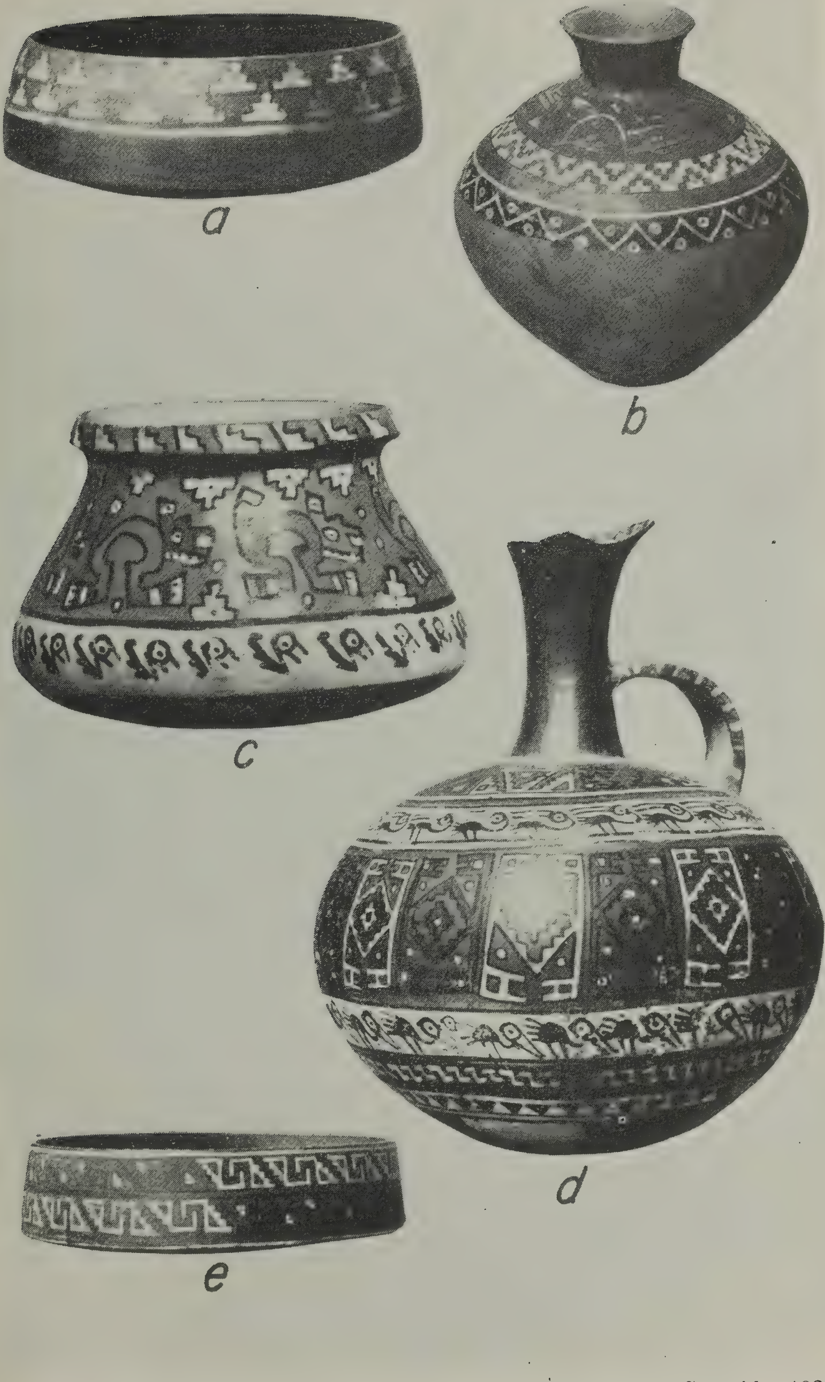


Plate 45.—**Middle Ica II style pottery from Ica Valley.** (After Schmidt, 1929, pp. 304, 307, 316, 313.)

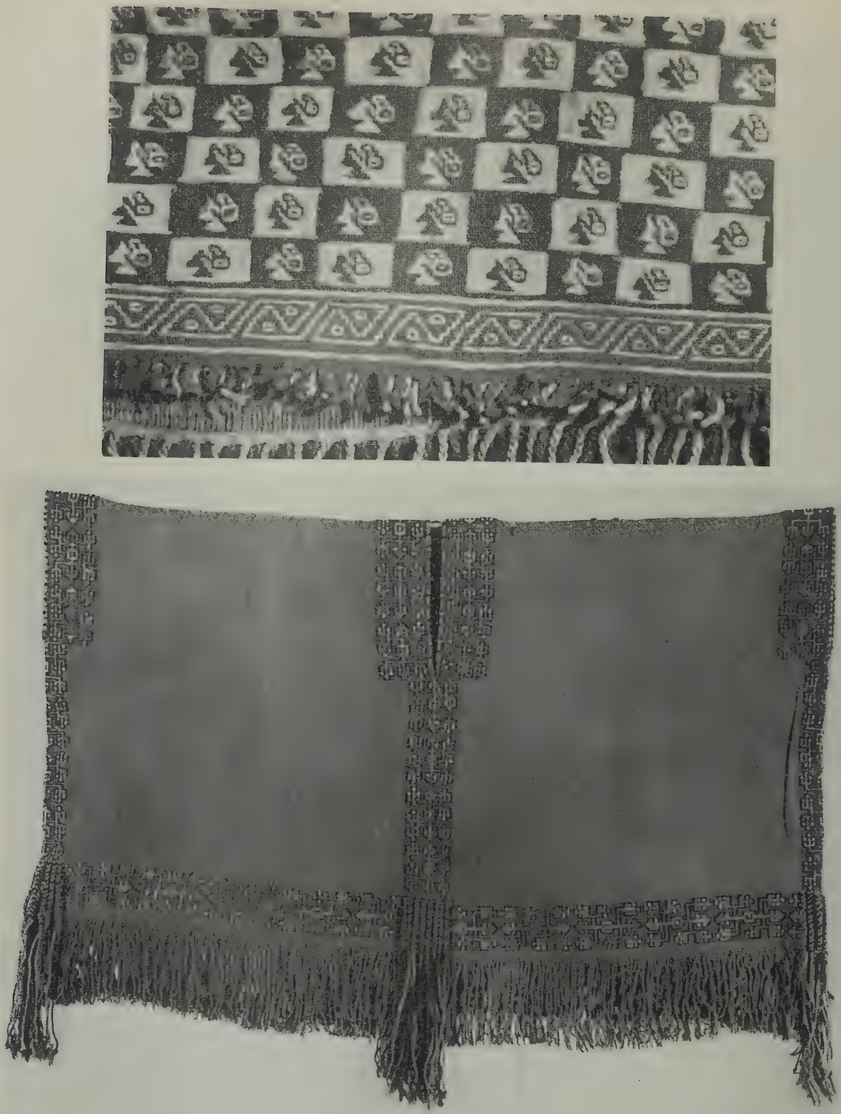


Plate 46.—**Middle and Late Coastal Period textiles.** *Top:* Late Period textile detail, double cloth. (Courtesy American Museum of Natural History.) *Bottom:* Middle Ica shirt. (Courtesy John Wise.)

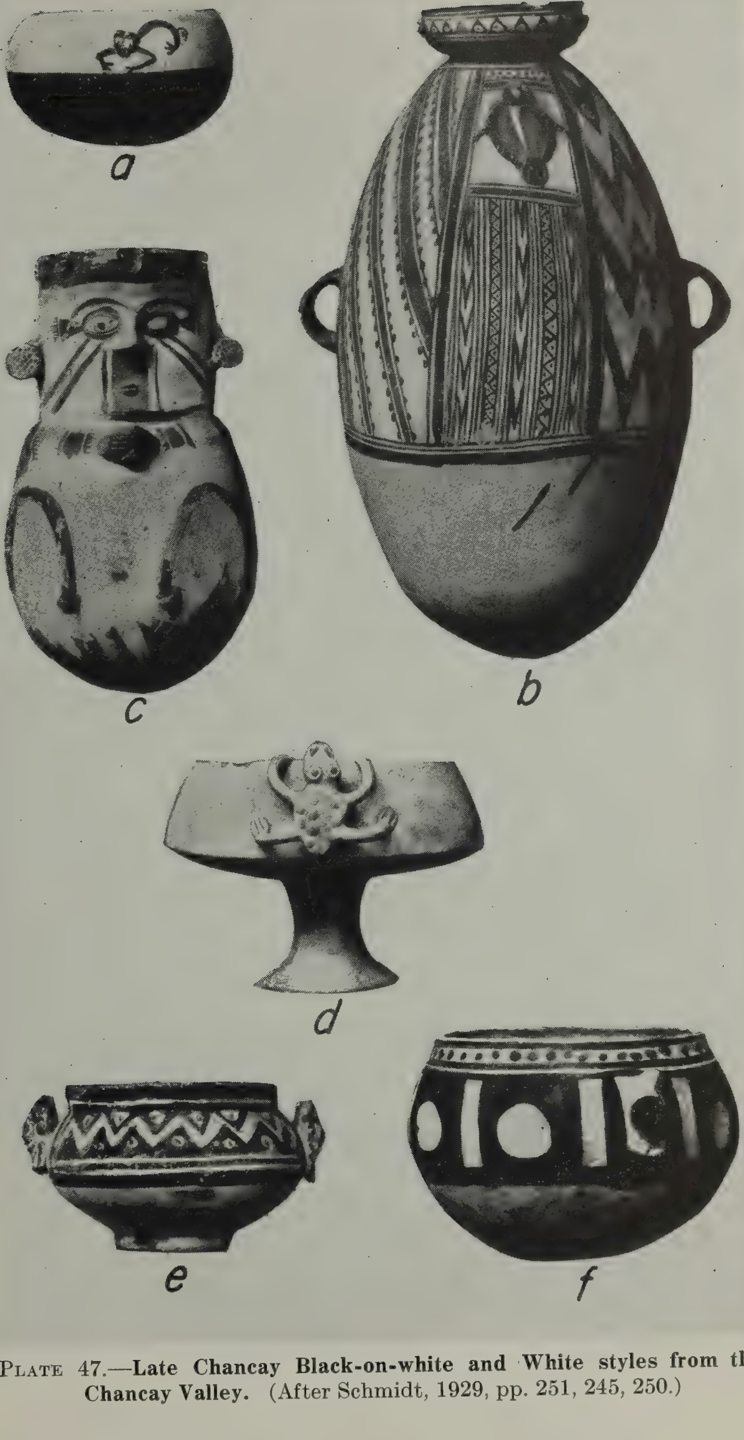


Plate 47.—**Late Chancay Black-on-white and White styles from the Chancay Valley.** (After Schmidt, 1929, pp. 251, 245, 250.)

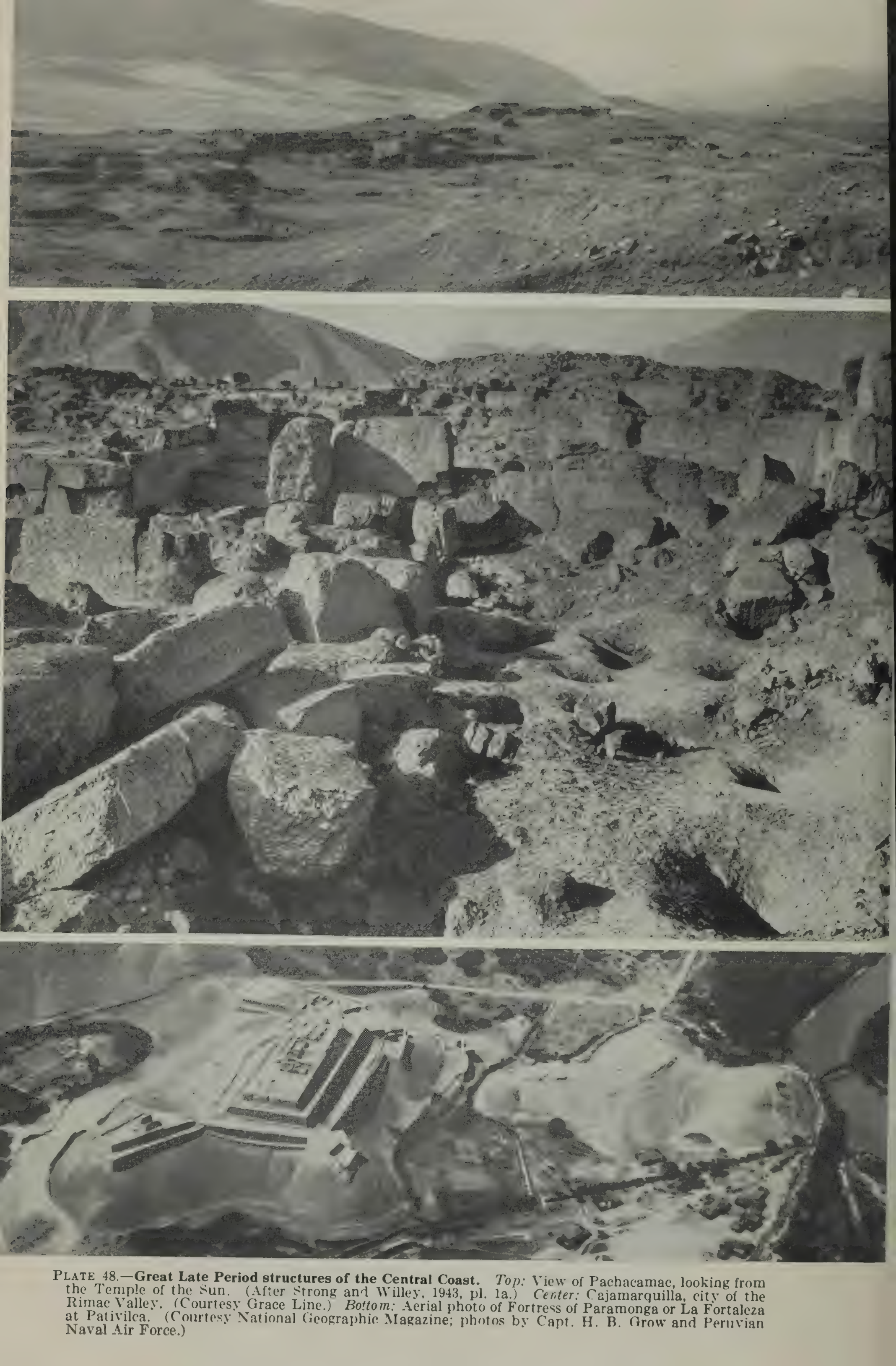


PLATE 48.—**Great Late Period structures of the Central Coast.** *Top:* View of Pachacamac, looking from the Temple of the Sun. (After Strong and Willey, 1943, pl. 1a.) *Center:* Cajamarquilla, city of the Rimac Valley. (Courtesy Grace Line.) *Bottom:* Aerial photo of Fortress of Paramonga or La Fortaleza at Pativilca. (Courtesy National Geographic Magazine; photos by Capt. H. B. Grow and Peruvian Naval Air Force.)

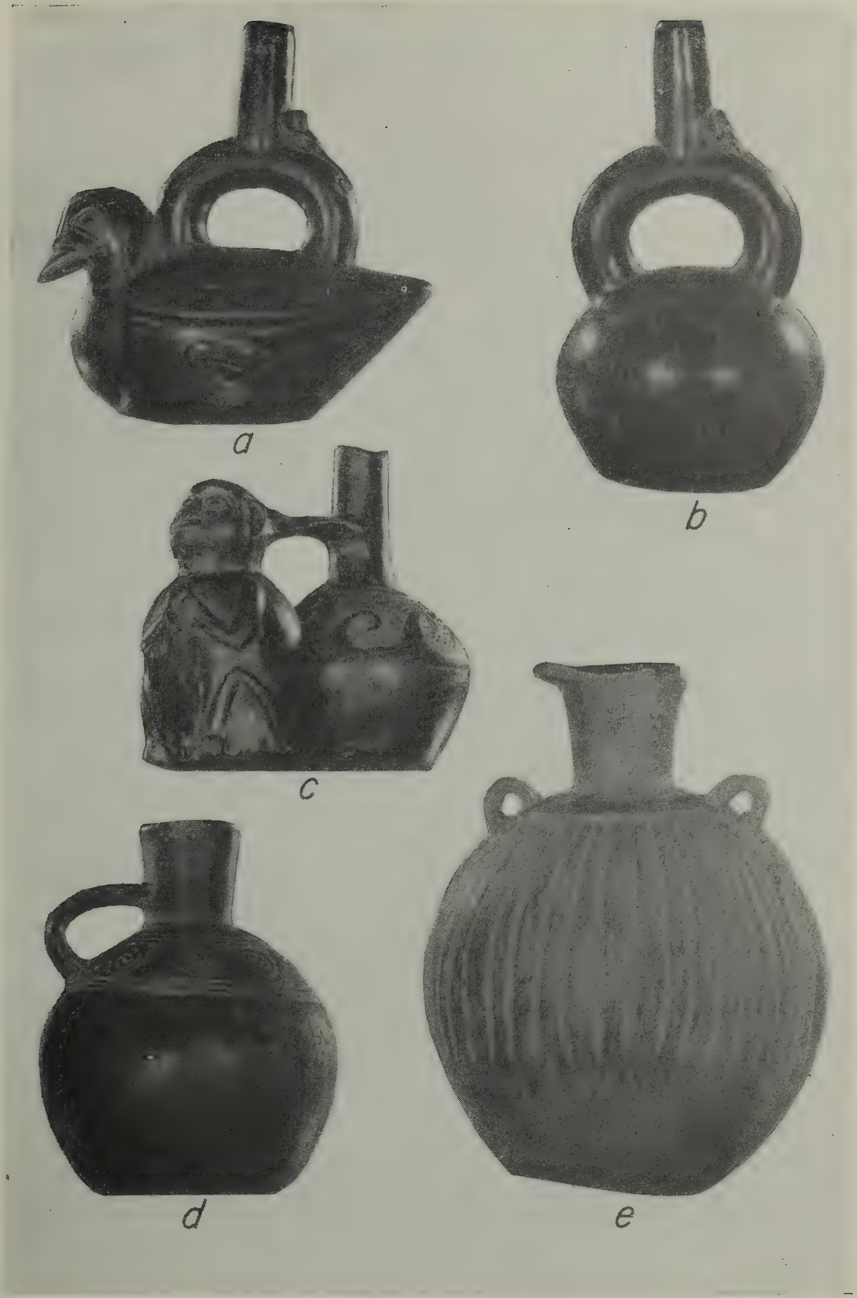


Plate 49.—**Late Chimu pottery.** *a–c*, From El Brujo, Chicama Valley; *d*, *e*, Black ware from a Lambayeque site. (After Bennett, 1939, figs. 17, 21.)

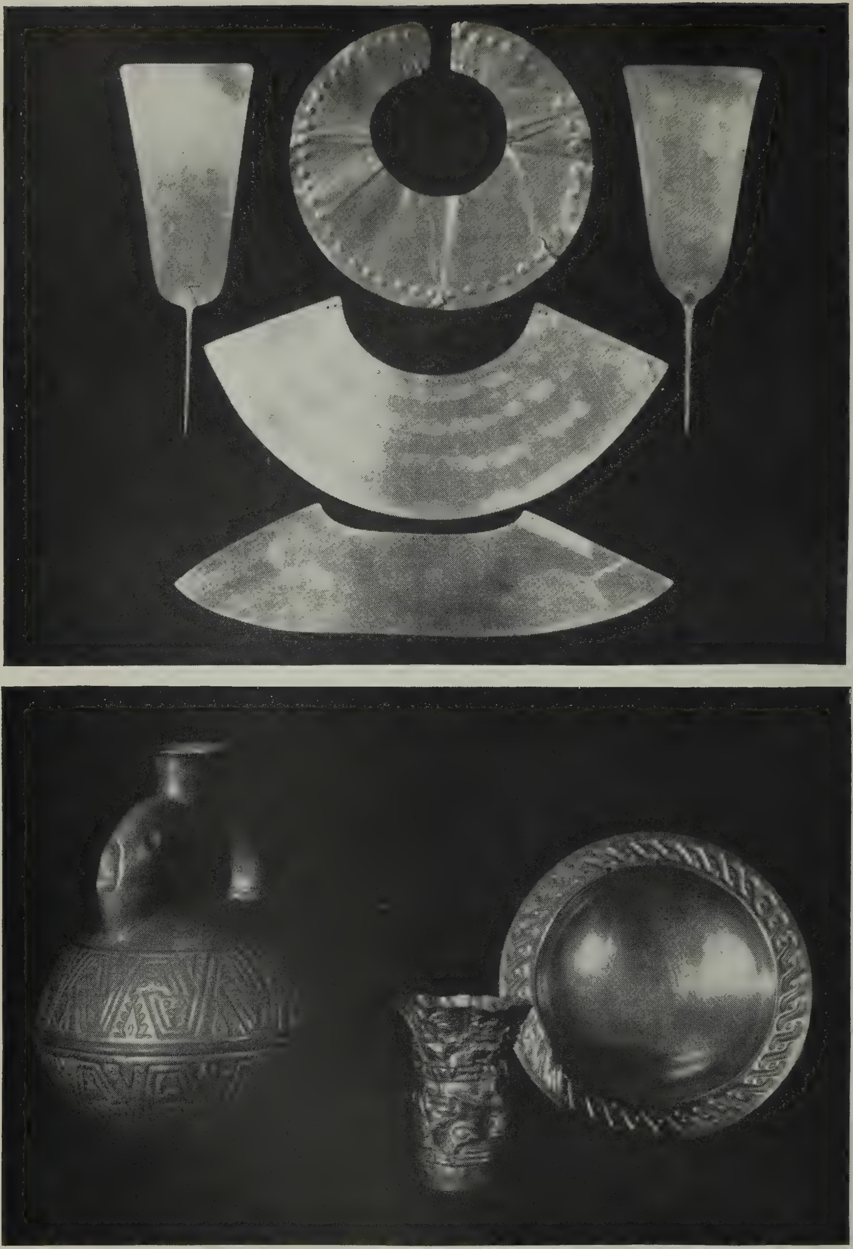
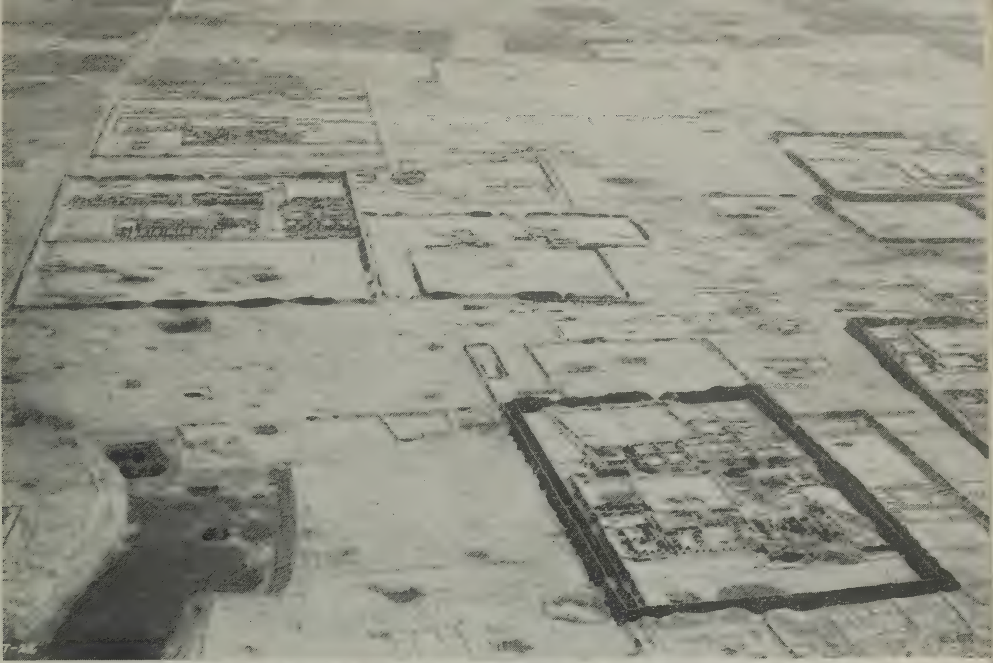


PLATE 50.—**Late Chimu goldwork from Huarmey.** *Top:* Gold collars and plumes. *Bottom:* Stirrup-spout vessel, goblet, and plate. (Courtesy American Museum of Natural History.)



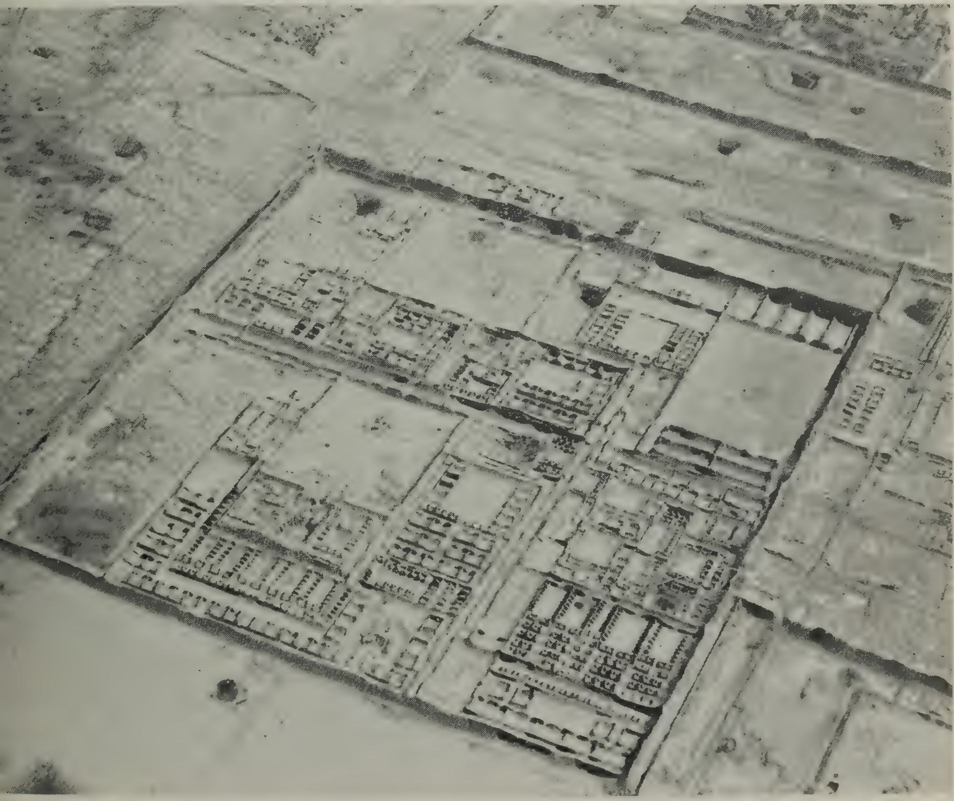


Plate 51.—**Chanchan, Perú.** *Top:* Aerial view showing extent of a part of the great Late Chimu city. *Bottom:* Aerial close-up of one enclosure at Chanchan. (Courtesy James Sawders.)

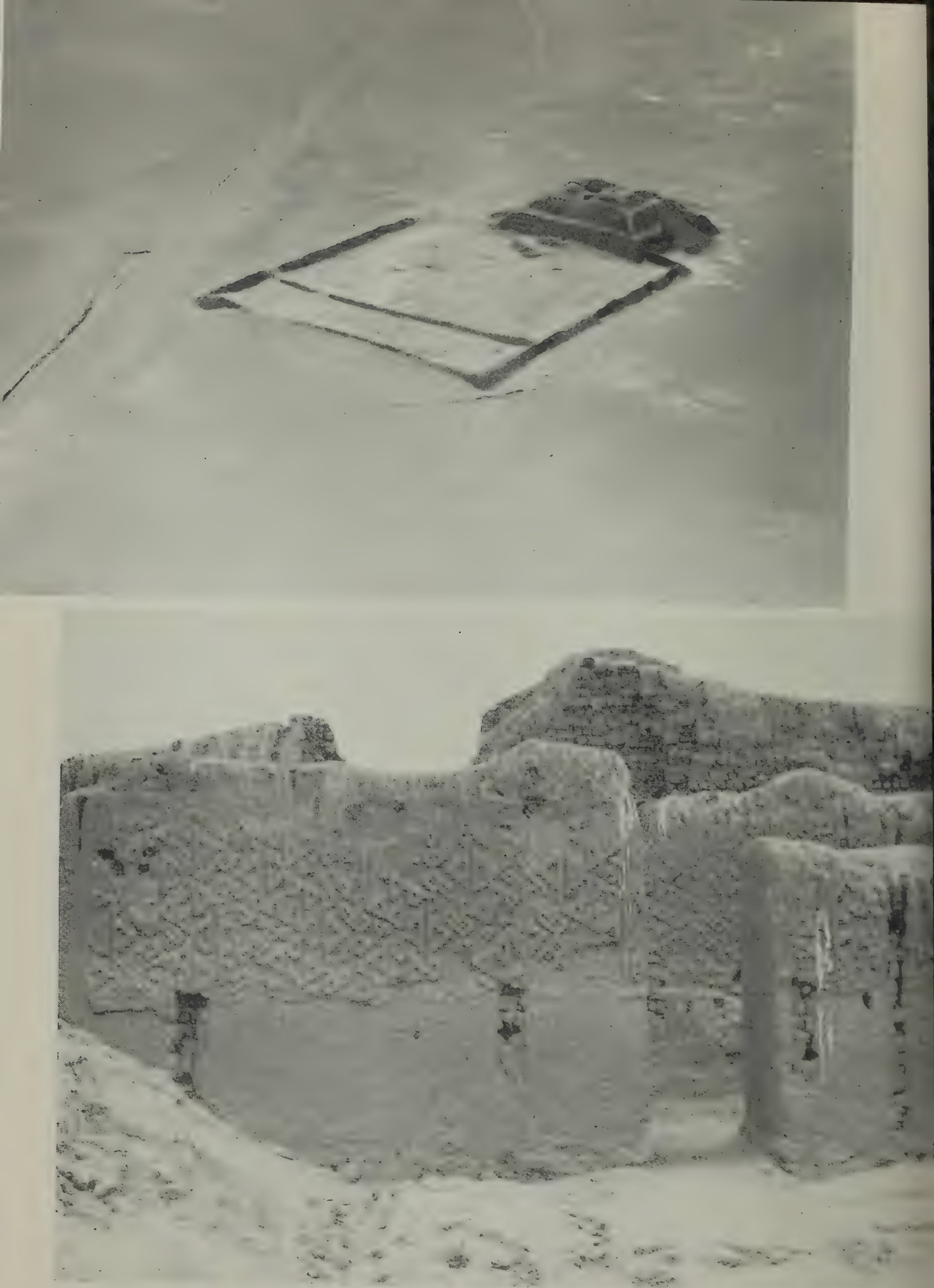


Plate 52.—**Archeological structures of the North Peruvian Coast.** *Top:* A temple in the Chicama Valley with remnants of an ancient highway crossing the desert at the left. *Bottom:* Wall arabesque at Chanchan. (Courtesy James Sawders.)

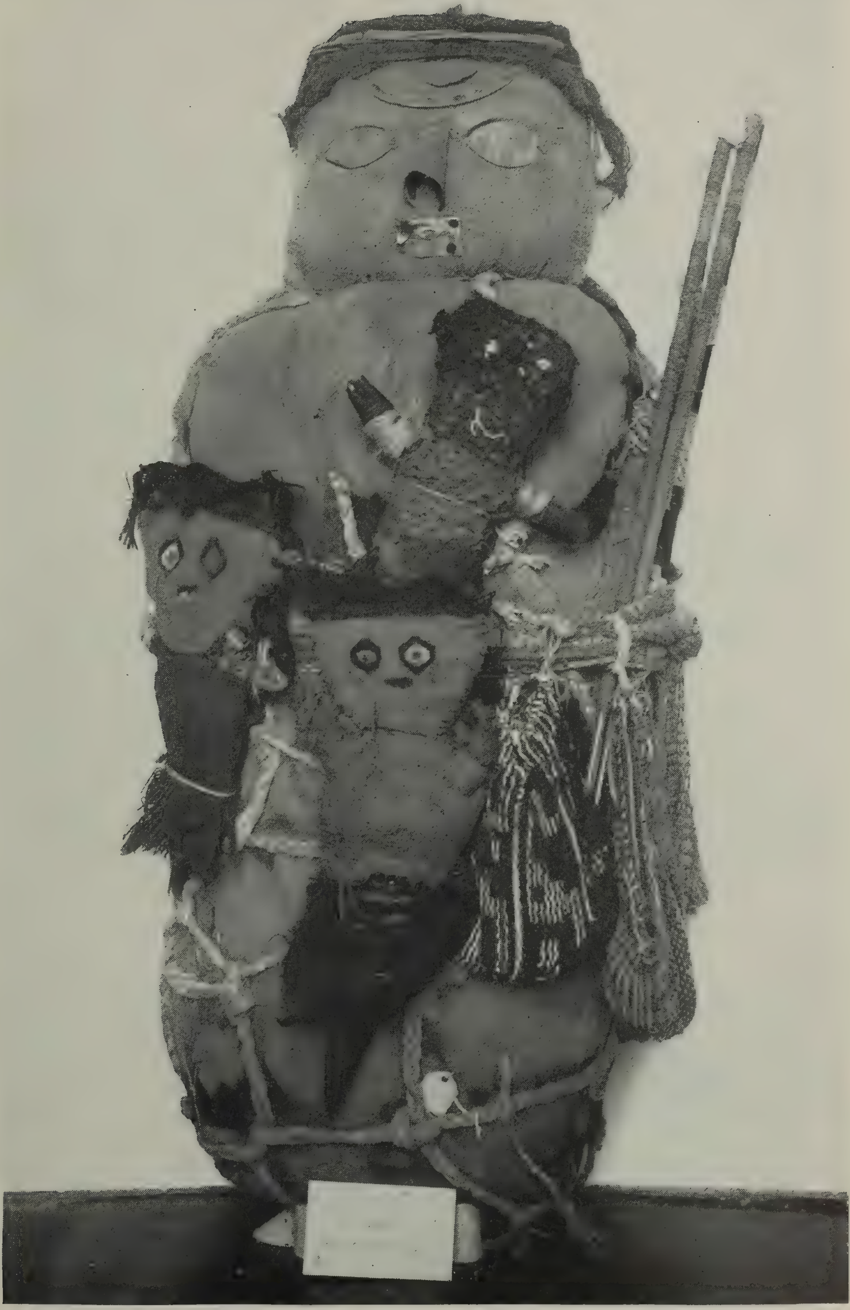


PLATE 53.—**Mummy bundle from Late Period of the Coast of Perú.** (Courtesy American Museum of Natural History.)

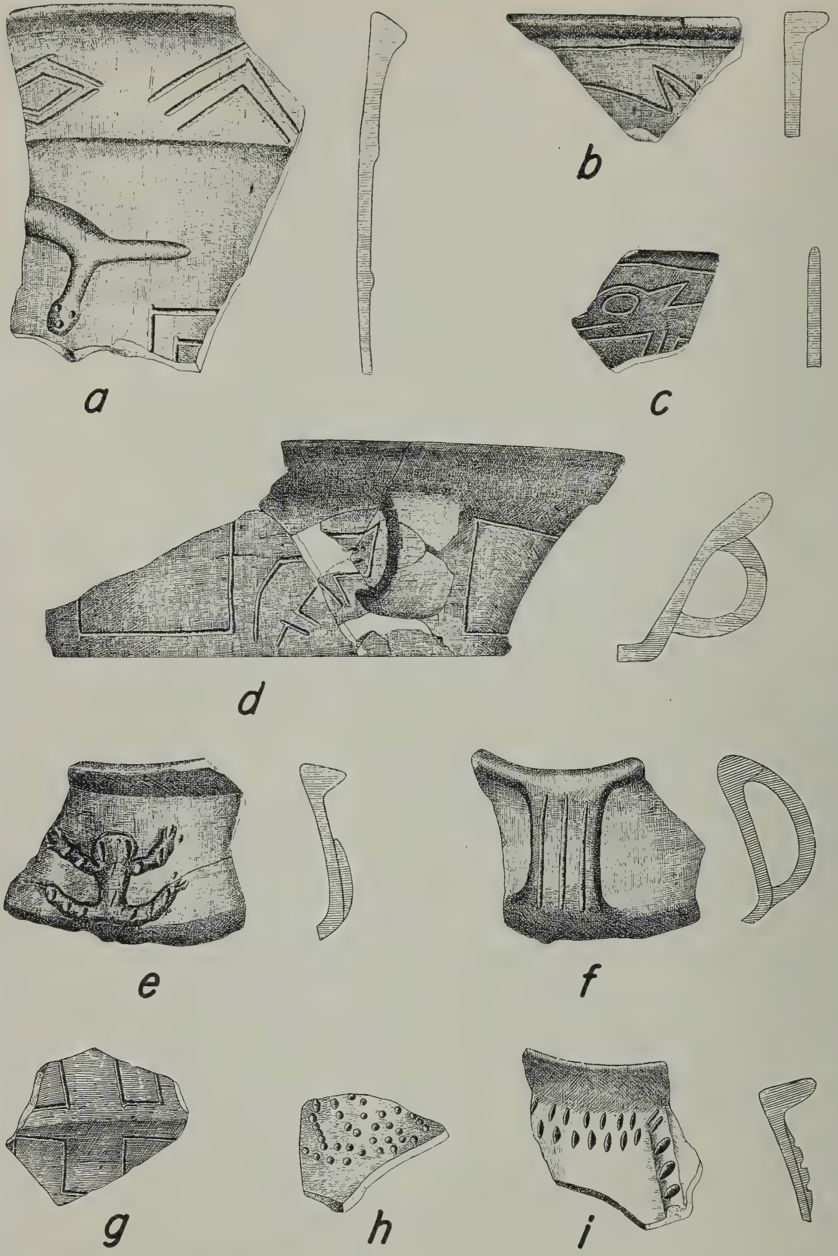


PLATE 54.—**Chanapata pottery.** *a*, *e*, Black-incised and modeled type; *b*, *c*, *d*, *f*, *g*, Black-incised type; *h*, *i*, punctate type. (After Rowe, n. d., figs. 10, 11, 12, 14.)

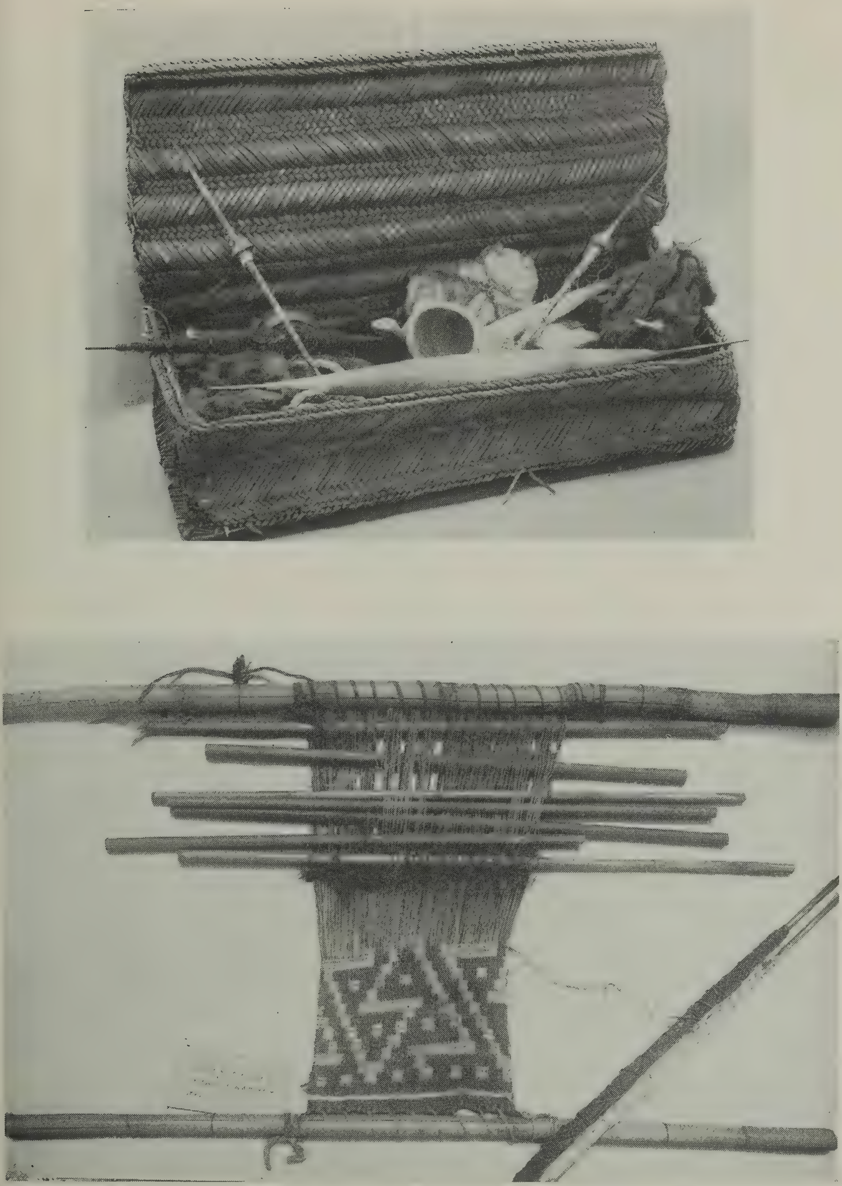


Plate 55.—**Peruvian weaving equipment of the Late Coastal Periods.** *Top:* Workbasket containing small weaving implements. *Bottom:* Double-cloth loom. (Courtesy American Museum of Natural History.)

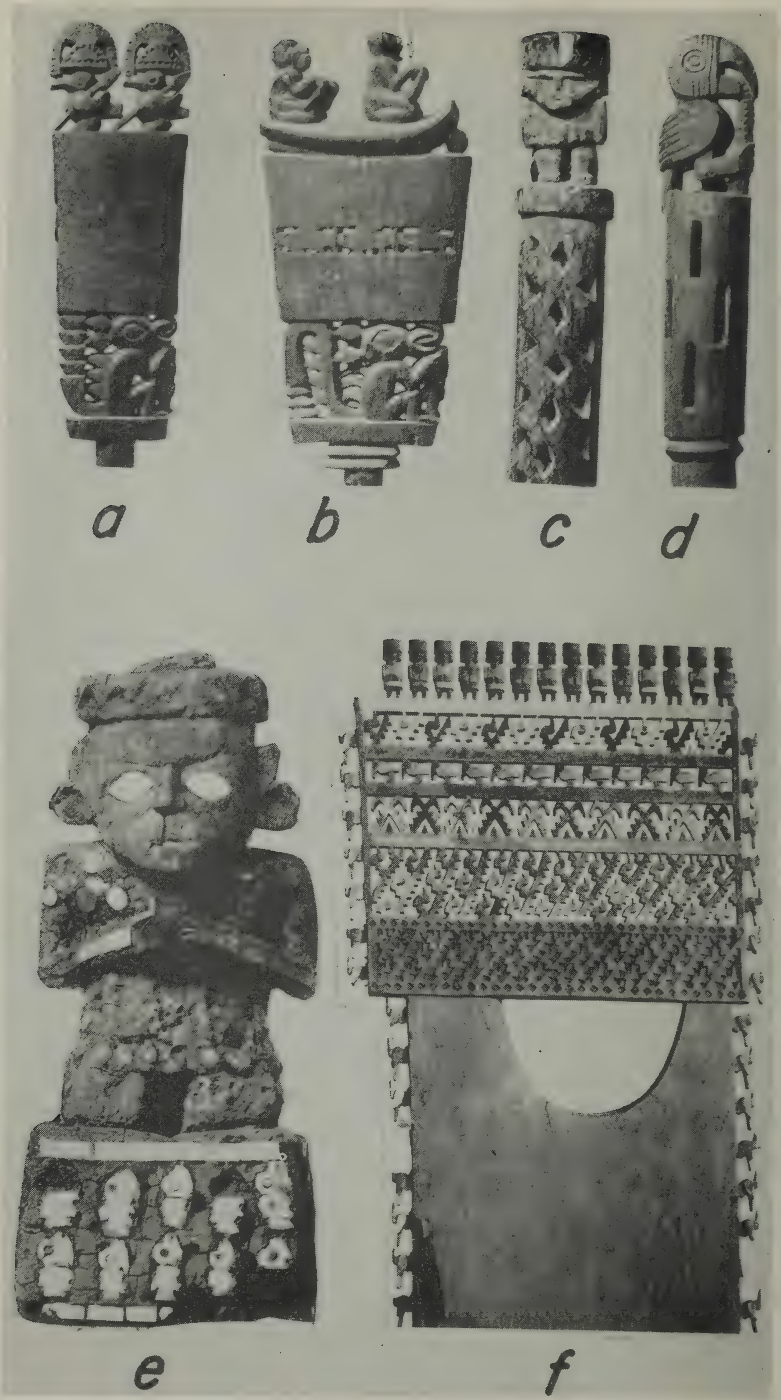


Plate 56.—**Peruvian wood carving.** *a, b,* Digging-stick handles from Trujillo (Late Chimu); *c, d,* Digging-stick handles from Huacho (Middle or Late Periods): *e,* Idol inlaid with shell, from Pachacamac (period?); *f,* Oar or rudder handle, Ica (Middle or Late Periods). (Height of *e* is 10¾ inches (27.5 cm.), other objects not to same scale, but range in height from 3½ inches (8.8 cm.) to 6 inches (15.3 cm).) (After Schmidt, 1929, pp. 423, 414, 429.)

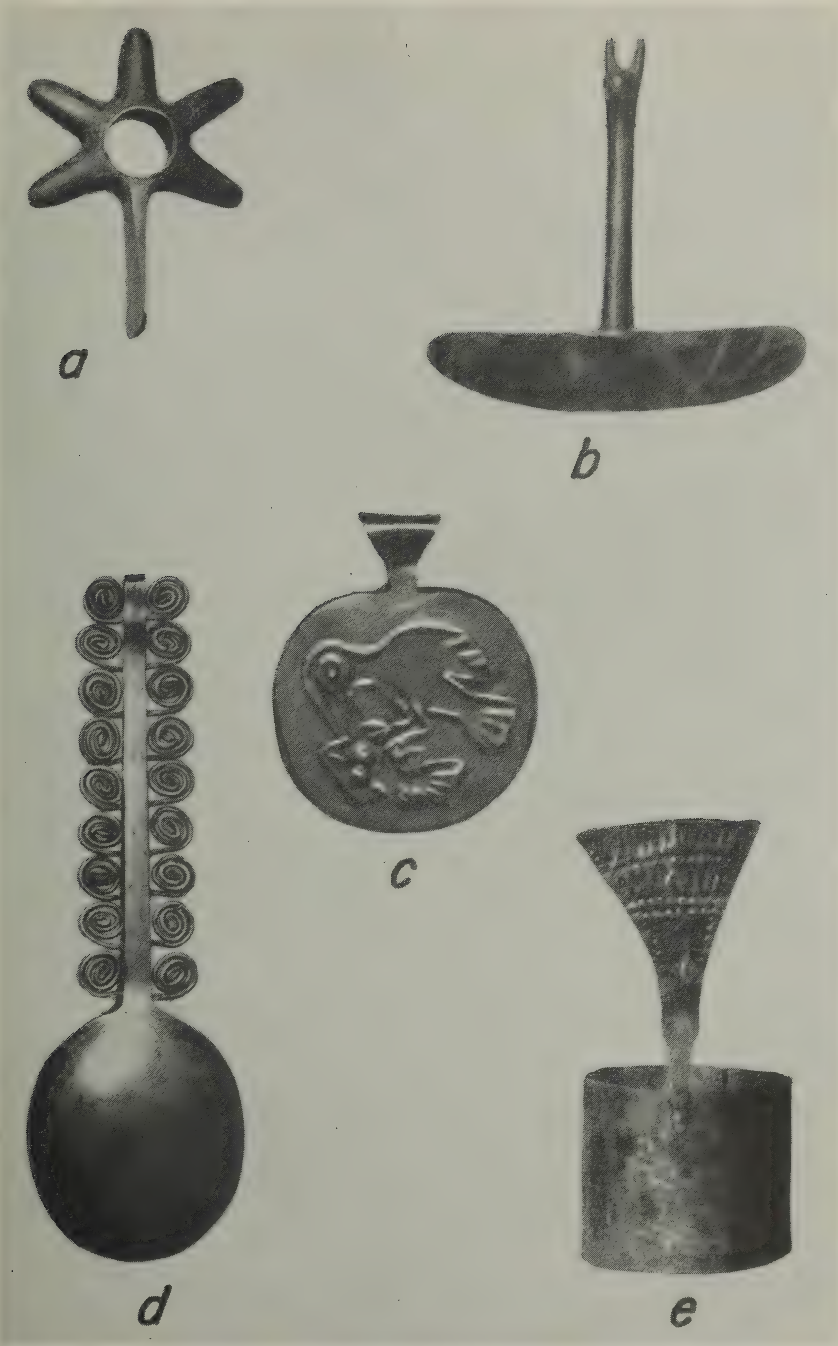


Plate 57.—**Metal tools and ornaments from prehistoric Perú.** *a,* Mace head of copper or bronze; *b,* knife of copper or bronze; *c,* gold tweezers; *d,* gold tweezers with handle; *e,* silver crown or headpiece. Specimens *a, b, Inca* style, from vicinity of Tiahuanaco; *c, d,* from Ica (period?); *e,* from Chimbote (period?). (Respective heights: *a,* 5 inches (12.5 cm.); *b,* 6 inches (15 cm.); *c,* 2 inches (5 cm.); *d,* 4½ inches (11.2 cm.); *e,* 13½ inches (34 cm.)). (After Schmidt, 1929, pp. 388, 369.)

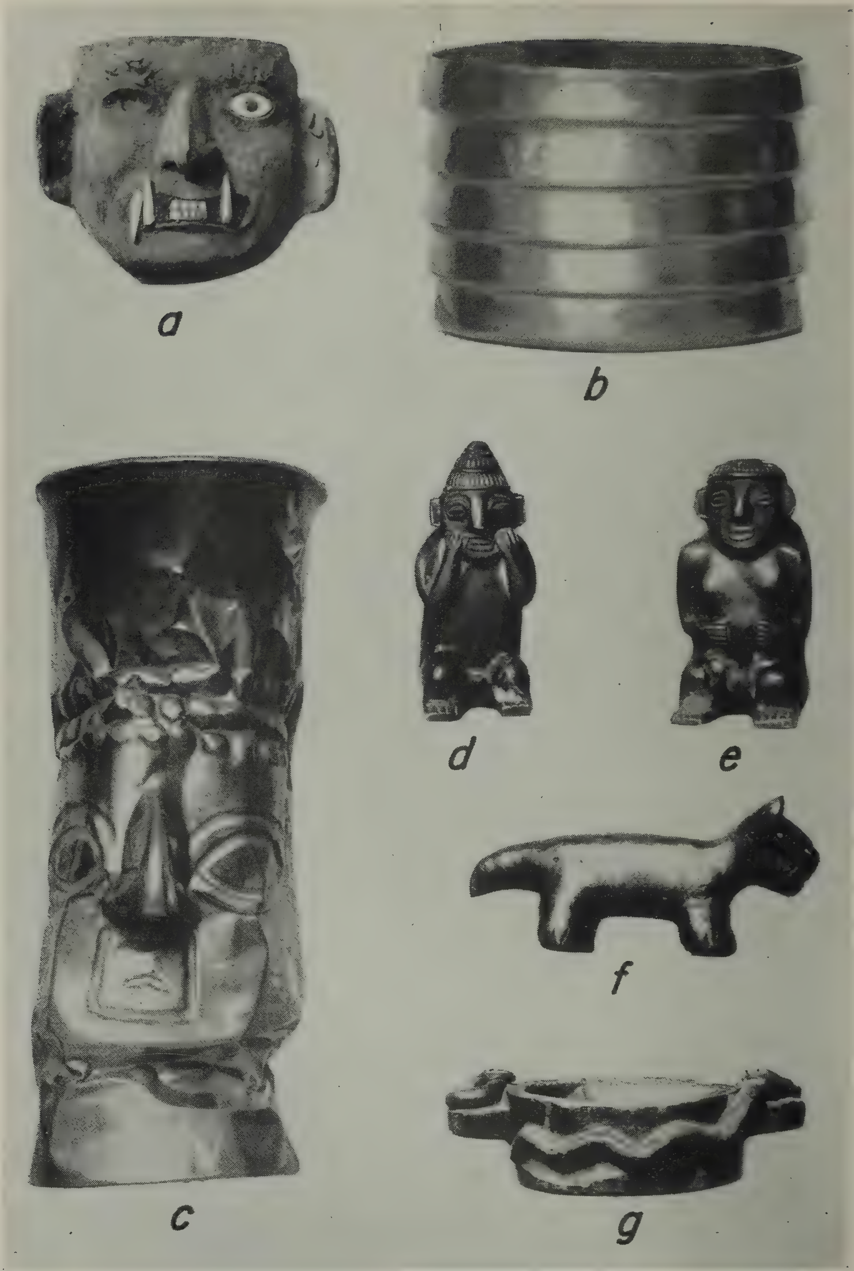


PLATE 58.—**Metal and stone objects from prehistoric Perú.** *a,* Copper mask with shell and pyrites eye and shell teeth; *b, c,* gold beakers; *d, e,* human figures of bronze; *f,* bronze cat; *g,* stone receptacle with serpent relief. Specimen *a,* from Chicama Valley (probably Early Chimu); *b,* from Ica (probably Middle Period); *c,* provenience unknown; *d–g,* vicinity of Cuzco (probably *Inca*). (Respective heights: *a,* 7⅛ inches (18 cm.); *b,* 2¾ inches (7 cm.); *c,* 6⅞ inches (17.5 cm.); *d,* 5⅛ inches (13 cm.); *e,* 4¾ inches (12 cm.); *f,* 2⅜ inches (6 cm.); *g,* 2⅜ inches (6 cm.).) (After Schmidt, 1929, figs. 375, 372, 373, 378, 459.)

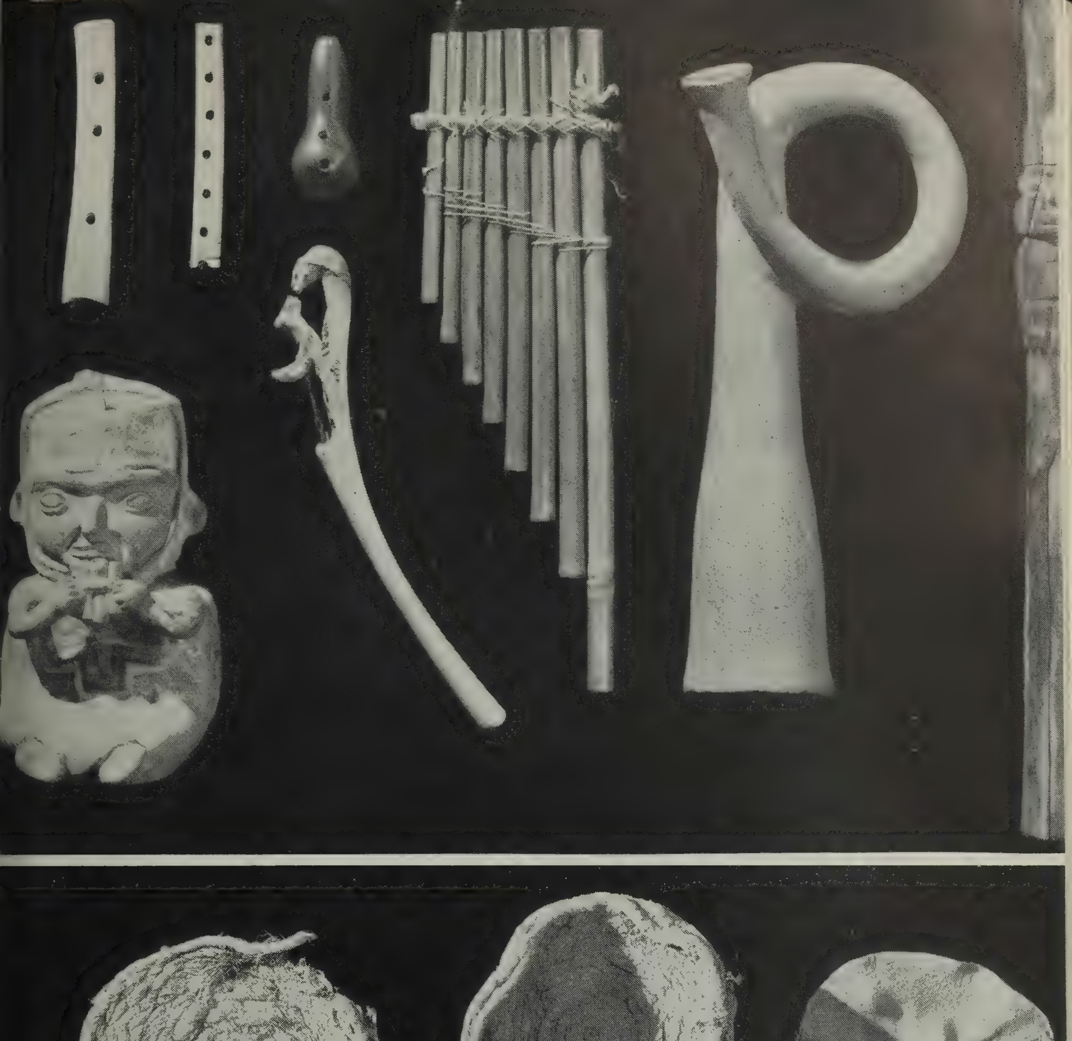


Plate 59.—**Miscellaneous Peruvian archeological objects.** *Top:* Musical instruments. *Bottom:* Types of sandals. (Courtesy American Museum of Natural History.)

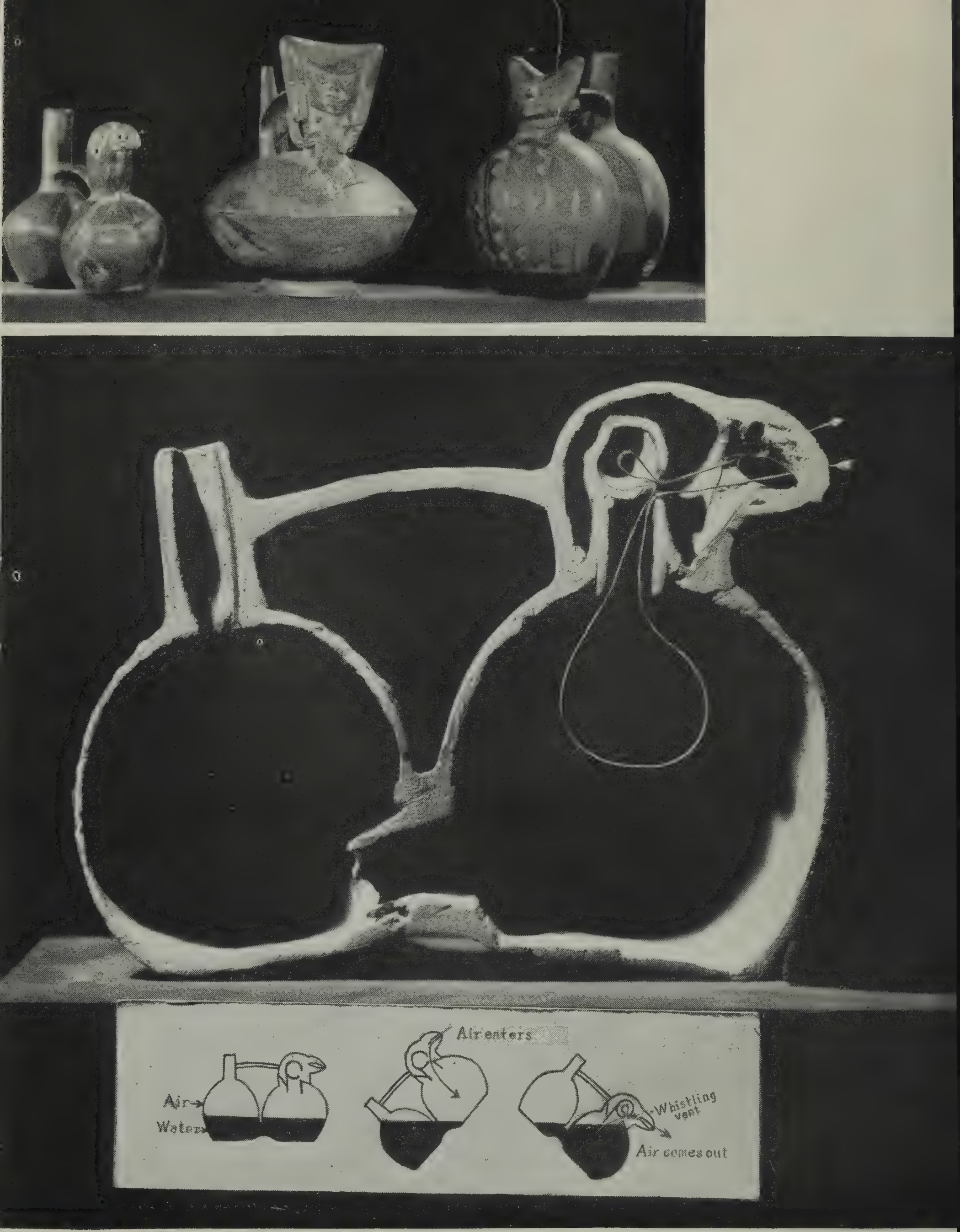

Air enters
Air
Water
Whistling vent
Air comes out

Plate 60.—**Peruvian whistling jars.** *Top:* Late Chimu style. *Bottom:* Actual cross section and diagrammatic sketch of a whistling jar. (Courtesy American Museum of Natural History.)

designs clearly related to the Highland Tiahuanaco style. (4) Some textiles, usually tapestries, with designs which resemble the stone-carving style at the site of Tiahuanaco. (5) Flaring-sided goblets and flaring-sided cups, or variants of these. (6) Double-spout vessels and face-collar jars. (7) Ceramic design elements, such as puma and condor figures, tridents, steps, scrolls and the like.

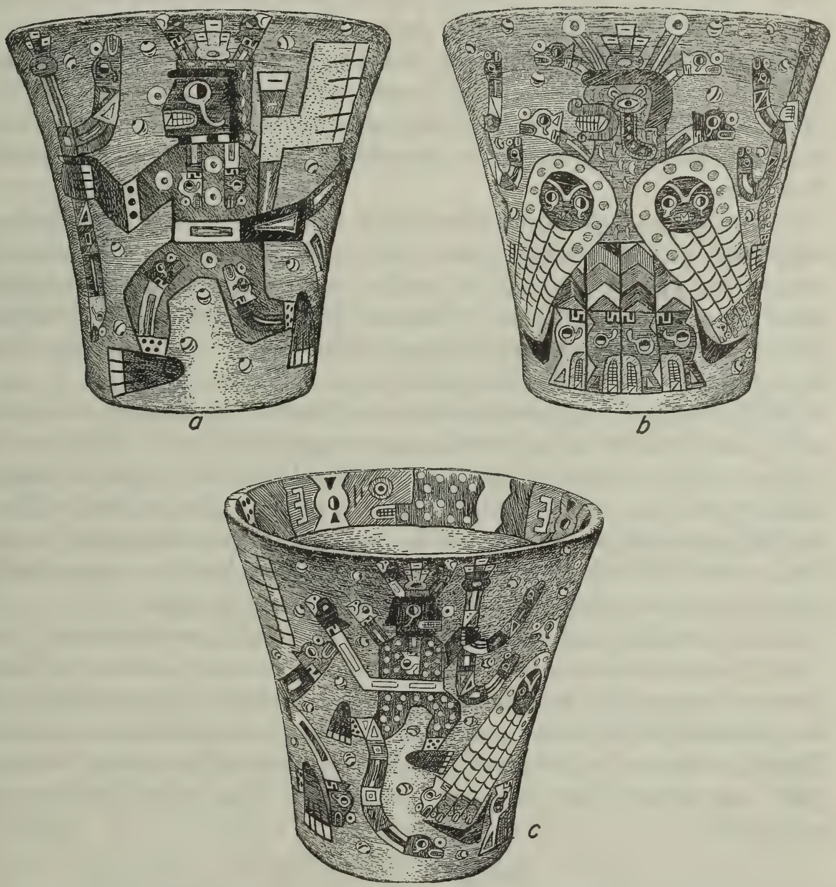


FIGURE 14.—Coast Tiahuanaco-A style vessels. (Drawn from George Hewitt Myers Collection, Washington, D. C.)

Other characteristics can be added to the above list for specific local areas. For example, large, thick urns are a Coast Tiahuanaco-A type on the South Coast. Tapering-spout jars with rounded handles, skull bowls, and yarn bowls with two flat, horizontal handles are associated on the Central Coast. For the North Coast, pressed-relief design and black ware can be added.

The greatest unity of Coast Tiahuanaco-A is found in the textiles (pl. 43). Weaving art is well developed and includes most of the known techniques. Intricate and ambitious tapestries are the most characteristic. Other frequent techniques are: brocade; warp-pattern weaving; double-cloth; painted cloth; both square and flat braiding; velvet or pile-knot, particularly in the form of squared hats; interlocking warp; knitting; some embroidery; and tie-dye patchwork. Red and yellow are the typical yarn colors, plus tan, brown, orange, and blue. The textile designs show a close relationship to Highland Tiahuanaco. Pumas, condors, human heads, and human figures are remarkably similar to the stone-carving designs on the "Gateway of the Sun" and on statues. In fact, the textile patterns furnish one of the best keys for the relationship of Coast and Highland Tiahuanaco.

No buildings have been associated with the Coast Tiahuanaco-A subperiod except a rough stone wall at Pachacamac. Presumably, other buildings at that site, as well as parts of Chanchan and others were built during the period. So far, Coast Tiahuanaco-A materials have been found mostly in cemeteries and rarely in habitation sites or in positive association with buildings.

At Pachacamac, the burials are in the form of bale-shaped mummies with false heads of metal, wood, clay, or painted cloth. The bundles are found in conical or cylindrical chambers lined with stones or adobes and covered with stone, cane, matting, or wood. On the South Coast, the large urns might have served for burial. Also underground chambers, covered with logs and hung with tapestries, have been reported to contain bundle burials of the Coast Tiahuanaco-A style.

Little attention has been paid to other artifacts associated with the Coast Tiahuanaco-A style. At Pachacamac are spindle whorls of clay, bone, and stone with incised designs; wooden staffs; bone spatulas with carved heads; shell, bone, and teeth amulets; and small wooden scales. There is no mention of metals, although presumably copper, bronze, gold, and silver were utilized. At Ancón, solid clay figurines are associated.

COAST TIAHUANACO-B

Coast Tiahuanaco-B materials have been found at Pachacamac, although not clearly isolated; in Late Ancón-I; at Chancay; at Huaca de la Cruz, Taitacantin, and Huaca Larga in Virú Valley; in one isolated grave at the Huaca del Sol; and as a stylistic influence in Middle Ica-II in the Ica and Nazca Valleys.

The style is characterized by geometric designs painted in black, white, and red. The typical vessel shapes are: round-bottom cups, annular-base bowls; squared stirrup-spout jars; face- or plain-collar jars with two small handles at the base of the collars; and flaring-collar bowls with two flat rim-to-body handles.

Other characteristics are difficult to discover, since most of the materials are from graves. In spite of the wide spread of the design style, little political unity is implied. In general, the Coast Tiahuanaco-B is transitional to the true Late Periods and shares characteristics with them.

COAST-HIGHLAND TIAHUANACO RELATIONSHIPS

In Highland Tiahuanaco four periods are recognized: Early Tiahuanaco, Classical Tiahuanaco, the hypothetical Derived Tiahuanaco, and Decadent Tiahuanaco. Coast Tiahuanaco has been divided into two subperiods. The discussion which follows is limited to the Classic Tiahuanaco and the Coast Tiahuanaco-A, since only these two show any marked resemblances.

Only two of the typical Highland Tiahuanaco ceramic shapes are found on the Coast: the goblet and the cup. Even in these shapes the Highland forms have flaring sides, the Coast forms generally have straight sides. Other Classic Tiahuanaco ceramic shapes do not occur on the Coast, nor do other shapes associated with the Coast Tiahuanaco-A occur in the Highlands. The ceramic design colors, on the other hand, are closely related, since both Coast and Highland Tiahuanaco employ black, white, yellow, and gray on a red-slip base. Likewise, fine finish and polish are characteristic of both.

The textile designs of the Coast Tiahuanaco-A Period are in many cases almost identical with the stone-carving designs of Highland Tiahuanaco. The central front-view figure of the "Gateway of the Sun," the running figures on the side, and the small sun faces all occur on Coast textiles. Were textiles preserved in the Highlands, they would probably be even more similar to the Coast fabrics.

In Highland Tiahuanaco, a distinction can be made between ceramic design and stone carving-textile design. This distinction is by no means maintained on the Coast, where the characteristic ceramic designs of the Coast Tiahuanaco-A are closely related to the textile designs. For example, a large urn from Pacheco is decorated with a front-view figure with both hands outstretched and holding staffs, like the central figure on the "Gateway of the Sun." Examples could be multiplied to show that the textile-stone carving design is an important factor in the relationship of Highland and Coast Tiahuanaco. Although this helps explain many of the similarities, it does not account for the two corresponding ceramic shapes, or for the ceramic design colors which are typical of both. Black and white, plus other colors, on an over-all red base are not colors derived from the textiles.

Many attempts have been made to explain the relationship of Highland and Coast Tiahuanaco, but none is completely satisfactory. One is that another site must exist somewhere between the Highlands and the Coast with materials which would account for the similarity. This is a good suggestion, but the hypothetical site has yet to be found.[2] A second is that such well-known sites as Pachacamac and Ancón are not the real centers of contact of Highland and Coast Tiahuanaco. Again this hypothetical coastal center which would explain all has not been discovered. A third, already mentioned above, attempts to explain the relationship in terms of the transfer of textiles and their designs. As has previously been mentioned, this does not explain the total ceramic situation. A fourth reverses the process and claims that Coast Tiahuanaco is a local outgrowth of Nazca, which then spreads to the Highlands. According to this explanation the Highland Tiahuanaco plain-stone masonry was later influenced by Coast textile design. It is true that the intricate, fine-line incision on Highland Tiahuanaco stonework is amazingly incongruous. On the other hand, the stages of development from Nazca to Coast Tiahuanaco are still hypothetical.

The pan-Peruvian Tiahuanaco horizon does not seem due to a mass migration from the Bolivian Highlands to the Coast. At least, the differences are greater than one would expect under such circumstances. Furthermore, Highland masonry and stone carving are not found on the Coast. Archeological evidence does not even indicate that the Coast Tiahuanaco-A was a politically united empire, such as the Later *Inca* Period. An alternative to political unity might be unity in religion. The Highland Tiahuanaco type site has frequently been interpreted as a religious center. The spread of such a dominant religion with its conventionalized design symbols would account for much of the Highland-Coast Tiahuanaco relationship. It would explain in part the spread of the design style without the accompanying evidence of political unity. However, these questions still remain unanswered.

THE MIDDLE PERIODS: NORTH HIGHLANDS

The Peruvian Andes have furnished little evidence for the distribution of Highland Tiahuanaco culture. Dressed-stone masonry and stone carving are found in many places, but the relationship with Tiahuanaco is not specific. In spite of a considerable amount of exploration and excavation in the Central Highlands near Cuzco, no Tiahuanaco Period has yet been isolated. In the North Highlands, Chavín is frequently compared with Tiahuanaco, but whatever relationships exist are certainly not the result of a direct spread of a Bolivian culture. Recuay too has stone buildings and stone carvings which bear some resemblance to Highland Tiahuanaco, but do not suggest direct contacts.

In the Callejón de Huaylas in the North Highlands, some ceramics are clearly related to the Coast Tiahuanaco in shape and design. These include flaring- or straight-sided goblets, round-bottom cups, double-spout jars, and face-collar jars. All are decorated with Coast Tiahuanaco designs, painted in three or four colors on a red-slip base. Local collectors claim that these ceramics are found in dressed-stone tombs built up above ground.

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[2] Recently, Dr. Tello has uncovered a site near Ayacucho which may well be the key to the problem.

WILKAWAIN-TIAHUANACO

Near the town of Huaraz at the ruins of Wilkawain, Coast Tiahuanaco-influenced materials have been found in stone-lined box graves under large boulders; in house-site refuse; and in stone-lined and covered tombs, 8 feet (2.5 m.) deep. Although a number of styles are represented, the materials clearly belong to the same period, which has been named Wilkawain-Tiahuanaco (fig. 15).

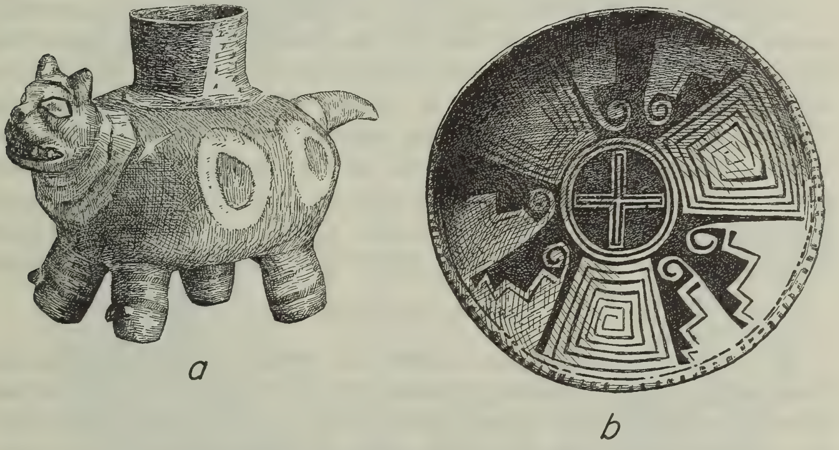

Figure 15.—Two vessels of the Wilkawain-Tiahuanaco style. (Drawn form specimens in the National Museum of Lima.)

The different ceramic styles which are found together in the deep tombs are: (1) Polished red ware collar jars, open bowls, plates, and modeled monkeys; (2) black ware straight-sided goblets, double bowls, and double-spout vessels, all without pressed-relief design; (3) two-color negative ware high-collar jars and shallow plates; (4) orange ware two-handled ollas, goblets, plates, and sieves; (5) painted ware with from two to four colors, always on a red or orange base. The designs of this painted ware are somewhat similar to the Coast Tiahuanaco of Middle Ancón-I and Nazca-Y.

The Wilkawain-Tiahuanaco is associated with stone building, not only in the stone-lined graves but also in one-room, above-ground house sites. Three-story temples with projecting cornices and carved-stone puma heads set in the walls may also be part of this period. Walls are made of split stones laid in horizontal rows, alternating thick and thin. No dressed stone is employed, but the masonry technique is reminiscent of Chavín. However, this technique is common in the North Highlands and does not necessarily imply direct relationship to the earlier period.

Copper pins, a wooden point with a gold-leaf overlay, stone beads, hammerstones, and chipped flint and obsidian points are all associated with the Wilkawain-Tiahuanaco culture. Perhaps the carved stone puma heads on tenons should also be included.

This North Highland extension of Coast Tiahuanaco influence suggests that contacts were frequent. It is also known that the North Highland influence was affecting the Coast at about the same time. Such exchanges aid greatly in the cross-dating.

MARAÑÓN

The little-known Marañón style in the North Highlands is generally considered as pertaining to the Middle Periods. It is characterized by shallow bowls and tripod plates, painted on the inside in a cursive style. The colors are variants of brown, red, and tan, and the principal designs include a dragonlike animal and elaborate geometric elements such as steps, scrolls, frets, and diamonds. Similarly decorated fragments have been found around Cajamarca, and the style is sometimes named after that town. Occasional pieces have been found on the North Coast of Perú (fig. 16) and in the vicinity of Huaraz.

MIDDLE HUAMACHUCO

In the far North Highlands, near the towns of Huamachuco and Cajabamba, three cultural periods are distinguished. The earliest is found at the ruins of Marca Huamachuco and designated as a Middle Period style. Massive stone walls of pirca construction, rising as much as three stories in height, are identified with this period. Stone sculpture is also included. There are crested animal heads with tenons, and likewise human heads with earplugs and ornamented headdresses. Blocks are carved with relief geometric and animal patterns. The ceramics may be plain red slip, two-color negative, or white paste with red and black cursive designs. The latter are similar to the Marañón style of ceramics.

THE MIDDLE PERIODS: SOUTH HIGHLANDS AND BOLIVIA

DECADENT TIAHUANACO

Following the spread of Tiahuanaco, there is a return to local, regional styles. In Bolivia, a Decadent Tiahuanaco Period can be isolated which, although related to the Classic Tiahuanaco, is technically inferior. Whether Decadent Tiahuanaco should be classified as a Middle Period or a Late Period is uncertain. It is clearly pre-*Inca* and post-Classic in the stratigraphic excavations. Likewise, it has no definite connections with the Coast Tiahuanaco Periods.

Decadent Tiahuanaco represents a break-down of the Classic style. Classic designs are usually complete; Decadent designs either leave out parts of the figure or use such elements as a head, face, or tail feathers for the total design. Classic-design figures, in spite of their rigid conventionalization, seem to have meaning; Decadent are used as pure design and may be placed upside down or combined. In the Classic style, geometric elements are usually combined with figures; the Decadent style uses many geometric elements by themselves, such as steps, perpendicular and wavy lines, double S's, horizontal wavy lines, angular and curved scrolls. Decadent designs are carelessly executed, and the colors are dull and limited to black, white, and red. One or two colors on an orange, red, or brown slip are typical.

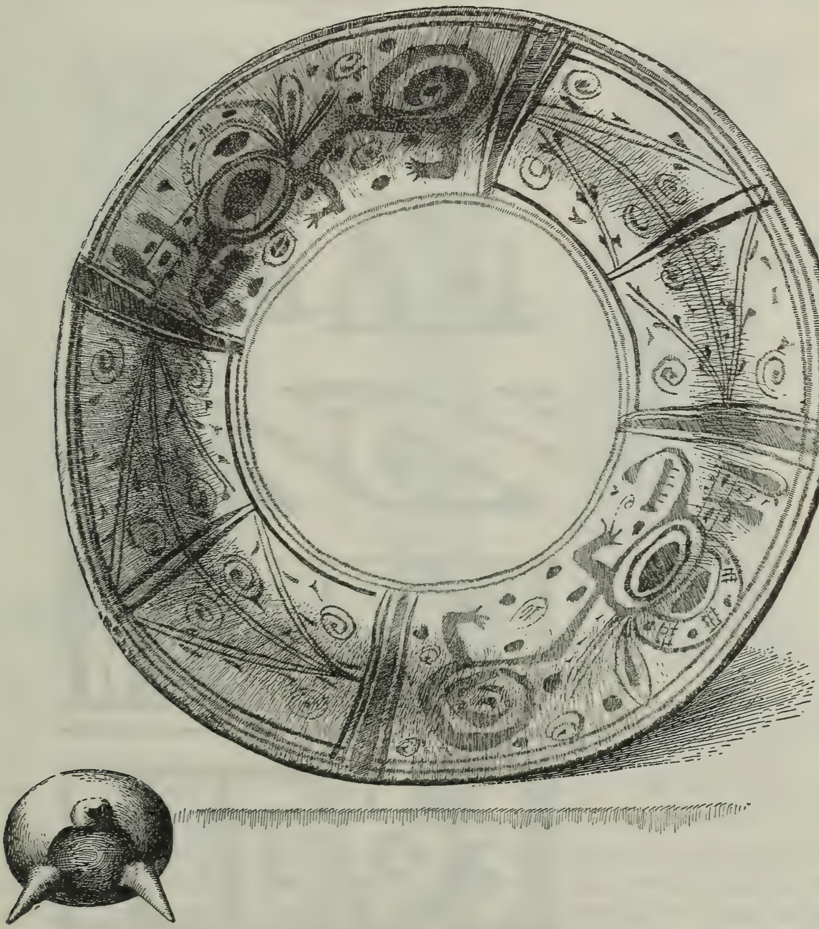

Figure 16.—Interior design of tripod bowl, Marañón style. (Drawn from specimen in Rafael Larco Herrera Museum, Chiclín.)

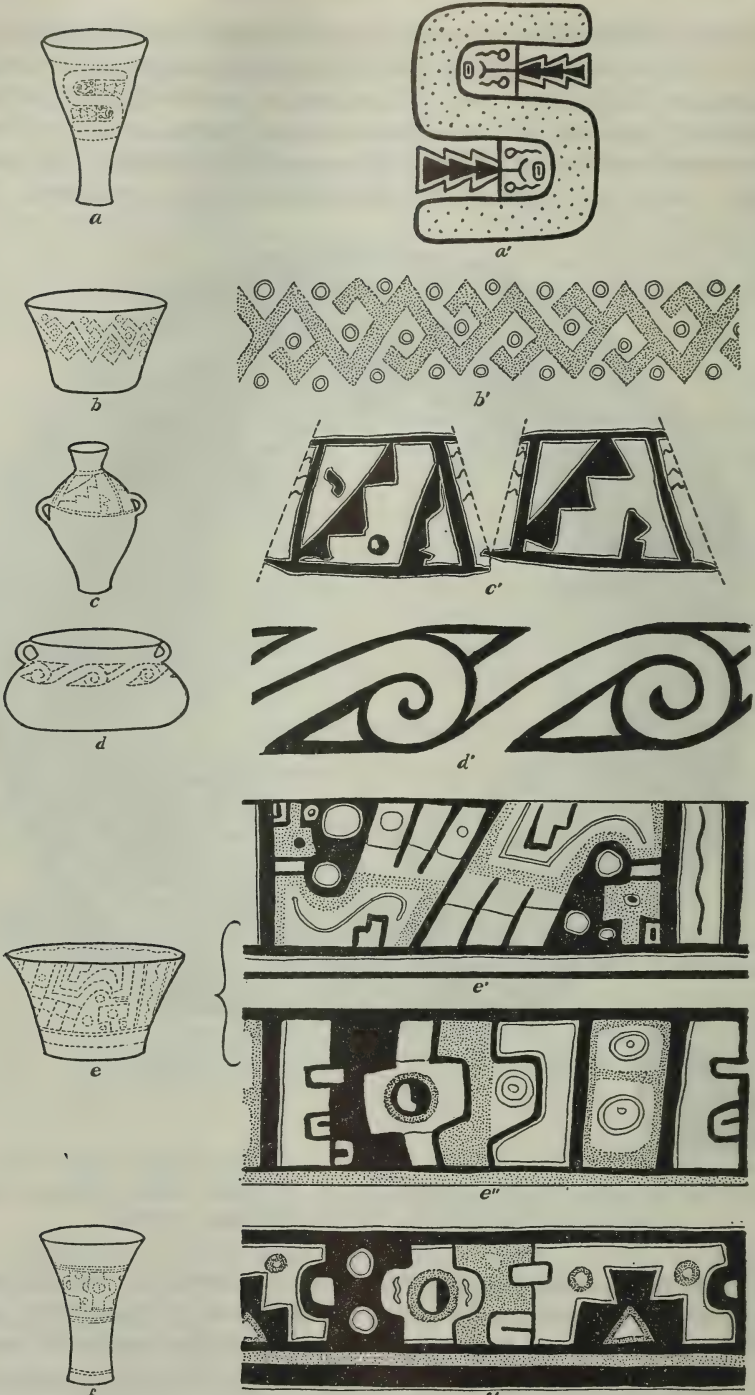

FIGURE 17.—Shapes and designs of Decadent Tiahuanaco style pottery. *a–a′*, Cochabamba style kero shape with line and dot design; *b–b′*, rounded-base cup with interlocking design with circles; *c–c′*, two-handled jug with step design; *d–d′*, open, rounded base bowl with black-on-red scroll design; *e–e′–e″*, cup, with two samples of design, one a depleted condor-puma combination, the other an elongated human face in profile; *f*, kero-shape goblet with Decadent human-face design. (After Bennett, 1934, fig. 17.)

Some of the Classic Tiahuanaco vessel shapes carry over, such as the goblet, the two-handled libation bowl, and the the flat-bottom cup. Even in these, new variations are found, such as straight rather than flaring sides, ornamental raised bands, and libation bowls without the modeled puma and llama heads. Several new shapes are introduced, including collar jars, angular-body vessels, spouted vessels, and one- or two-handled jars. In total, the Decadent Tiahuanaco vessel shapes are more varied than those of the Classic Period (fig. 17).

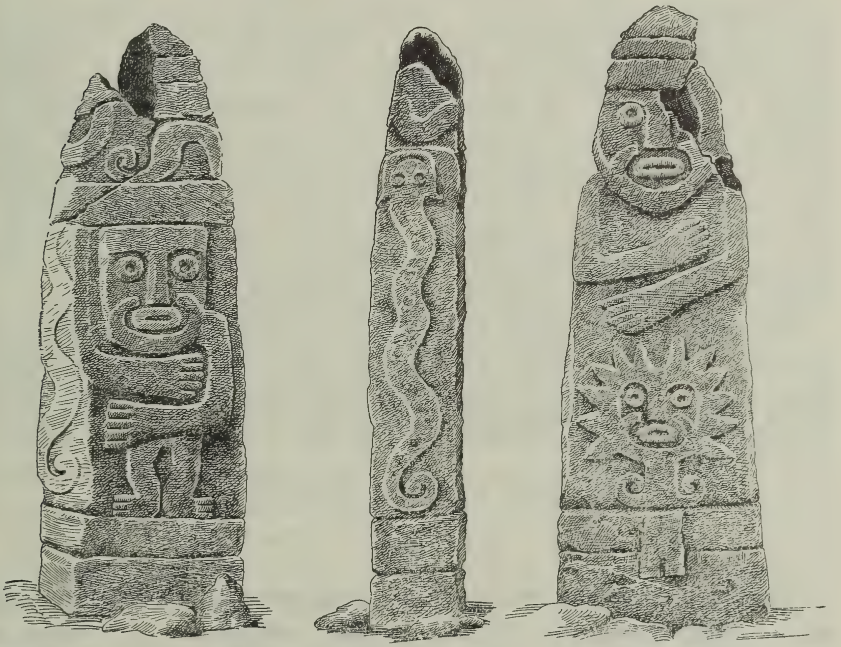

Figure 18.—Tiahuanaco stone statues at Mocachi, Bolivia. (Redrawn from Casanova, 1942 c, fig. 3.)

None of the important buildings at the Tiahuanaco site has been assigned to the Decadent Period, although the small temple east of Calasasaya probably belongs to it. This temple is a semisubterranean structure with facing walls made of upright stones and small stones, and has a variety of carved stone heads as wall decorations. Some of the stones are dressed, some rough, and all of them, including the carved heads, were probably collected from older buildings and reassembled in this crude temple. Similar semisubterranean temples have been associated with the Decadent Tiahuanaco at Chiripa and Lucurmata. No stone carving is definitely associated with this period, although it is possible that some of the technically inferior carvings might be assigned to it (fig. 18).

Decadent Tiahuanaco does not suggest the strong social or religious organization of the Classic Period. It is found at many sites in the altiplano of Bolivia and southern Perú, but the influence probably carried no farther afield. The characteristic Decadent Tiahuanaco had disappeared before the arrival of the *Inca.*

THE LATE PERIODS

Following the pan-Peruvian Tiahuanaco horizon, local styles emerge in the major geographical regions of Perú and Bolivia. Although most of these are distinctive styles, the break with the Middle Periods is not a sharp one. In many areas, the transition from Middle to Late is easily traced. Some of the Late Periods have rather wide distribution, but none can be called pan-Peruvian. Chronologically, the Late Periods fall between the Tiahuanaco and the *Inca* horizons. The *Inca* ultimately incorporated the whole region of Perú and Bolivia in their political Empire, but even before that was achieved *Inca* influence can be seen in the closing phases of the Late Periods.

Description of the Late Periods again follows the geographic sequence of South, Central, and North Coast, and North and South Highlands. The Central Highlands were apparently dominated by the developing *Inca* civilization during the time of the Late Periods.

THE LATE PERIODS: SOUTH COAST

ICA

The valleys of the South Coast had reverted to local cultural styles even during the Middle Periods. Although such styles as the Middle Ica-I (pl. 44, *c*) and Middle Ica-II (pl. 45) in the Nazca Valleys can be correlated with Middle Periods elsewhere, their local character is outstanding. The Late Period on the South Coast, called Ica or Late Nazca, is in reality a development and continuation of the trend started in the Middle Periods. The sequence established for Ica Valley includes Middle Ica-I, Middle Ica-II, Late Ica-I (pl. 44, *d*, *e*), Late Ica-II (pl. 44, *g*), and *Inca* (pl. 44, *f*). These periods are not sharply distinguished, but change gradually from one to another.

The Ica style is found in the Cañete, Chincha, Ica, and Nazca Valleys, and there are some suggestions of its extension much farther to the south. In fact, some authorities speak of a dominant Chincha (or Ica) culture which mixed with southern elements to form a *Chincha-Atacameño.* This combined culture presumably had a wide spread in southern Perú and Northern Chile. Most authorities, however, await further evidence before accepting the *Chincha-Atacameño* concept.

Most surface ruins in the South Coast valleys are assigned to the Ica or *Inca* Periods. Although this suggests more people and better building organization than in the Early Periods, at no time could these valleys have supported truly large populations. Tambo Colorado in the Ica Valley and La Centinela and Tambo de Mora in Chincha Valley are typical of Ica Period ruins. These consist of combinations of pyramids, stairways, terraces, and courts. True towns are rare, and the houses associated with the outstanding ruins seem to have been either the residences of important people or ceremonial rooms. Squared, hard-baked adobes are common in the construction, and many walls are made of puddled clay or tapia. Some of the buildings have typical *Inca* wall niches and narrow-topped doorways. Some walls are decorated with colored plaster, with frets made by arrangements of adobe bricks, and rarely with clay arabesques.

Cemeteries are located near the ruins and in the hot sands. Two grave types are reported: a shaft grave with a chamber opening to one side and a roomlike chamber grave with a roof of leaves supported on poles. The burials were wrapped in leaves, skins, and cloth and bound with rope. Ceramics and other artifacts were placed in the graves. Some skulls show artificial occipital flattening.

Ica ceramics can be subdivided on the basis of the presence or absence of *Inca* influence. Late Ica-I Period is more or less a continuation of Middle Ica, while Late Ica-II shows the *Inca* influence. Late Ica-I ceramics are characterized by the use of red, white, and black colors, and the predominance of textile pattern designs. Some design units are frankly geometric, such as series of diamonds or squares, and others are highly conventionalized birds or fish, arranged in rows. Most designs are found in the woven fabrics as well as on the ceramics. Open bowls with angular sides, rounded bottoms, and beveled rims are typical. Other common shapes are constricted, flaring-collar jars, and a long tubular-collar vessel with a flaring rim and flat handles.

In Late Ica-II ceramics, *Inca* influence is noted in the vessel shapes, and in such features as horizontal flat loop handles and pointed bases. The true *Inca* aryballoid shape occurs with decoration in the local Ica style. A typical vessel has a barrel-shaped container with a short flaring collar and two looped handles. Other shapes carry over from the Late Ica-I, and in general the colors of the ware and the design tendencies are the same as before. Although much of Ica pottery is decorative and well executed, it lacks the originality and the freedom of expression found in the Nazca Period. In fact, the Ica ceramics show virtually no Nazca influence. There is, however, some Chimu influence from the North Coast.

Weaving was well developed in the Ica Period (pl. 46, *bottom*). Tapestry, embroidery, and weft-pattern weaves are all common.

There is frequent use of applied fringes and tassels, and borders of small insets of tapestry. Slings are found in great numbers, made by a combination of braiding and warp-weave tapestry. Textile designs are essentially geometric in spite of the use of small conventionalized bird and animal figures. Small design units are either arranged in horizontal bands and slanting rows or framed in squares, diamonds, and lozenges. The textiles show some unusual parallels with Chimu pieces from the North Coast, implying widespread contacts.

In general, the Late Period on the South Coast is hard to characterize. Weaving and ceramics were equally developed, and utilitarian objects and ornaments were made of gold, silver, copper, and bronze (pls. 57, *c*, *d;* 58, *b*). The architecture is competent but not unusual. Little can be implied about the social and political organization. The whole area fell to the *Inca* with little resistance, and their social organization dominates the scene.

THE LATE PERIODS: CENTRAL COAST

Most of the Late Periods on the Central Coast following the Middle Periods are heavily influenced either by the Chimu style from the North Coast or by the *Inca* style from the Central Highlands. At the ruins at Pachacamac, a pure *Inca* Period is found preceded by a style which shows this combined influence. Black ware double jars, aryballoid shapes, collar jars with flat handles, and stirrup-spout vessels all demonstrate this. Face-collar jars with handles painted on the body of the vessel are a local element in the mixture. Elsewhere on the Central Coast, the same situation exists. In some sites, the predominance of the Chimu style is great enough to suggest an actual extension of the Chimu culture itself.

CHANCAY BLACK-ON-WHITE

An exception to the general picture of Late Periods on the Central Coast is a Black-on-white style found at several places in the Chancay, Ancón, and Rimac Valleys. The ceramics (pl. 47) are composed of thin porous red or orange clay, covered by a scaly white slip over which are painted black or dark-brown designs. Stripes, both wide and narrow, single and grouped, are typical, and other common elements are rows of dots, wavy lines, cross-hatch, toothed diagonals, and small birds or animals. For the most part the designs are skillfully applied. Bowls and dishes are found, but two ceramic shapes are dominant: a goblet and an elongated globular vessel with a bulging collar which is frequently decorated with a face and two loop handles.

All evidence indicates that the Chancay Black-on-white style is late, and probably contemporaneous in part with *Inca*. The absence of definite *Inca* or Chimu influence is interesting. This is the only distinctive style in the Late Periods of the Central Coast, and it demonstrates that local groups were able to carry on their own cultural traditions in spite of the political dominance of the *Inca.*

THE LATE PERIODS: NORTH COAST

CHIMU

On the North Coast the dominant Late Period is the Chimu, or Late Chimu. It follows the Middle Periods without a sharp break and ultimately merges with the *Inca* Period. The traditional *Inca* history tells of the conquest of the Chimu realm, but certainly strong *Inca* stylistic influences occurred before. The chronological position of Chimu is well established by stratigraphic grave series at the ruins of Moche. The style has been well isolated in cemeteries in Virú Valley, at Chanchan, and in Chicama, Lambayeque, and Piura Valleys.

Chimu culture has a dominant, outstanding style, in spite of the fact that many of its elements can be traced to previous periods. Many of the pottery shapes and textile techniques carry over from the Middle Periods. The earlier Mochica tradition is revived in modified form. North Highland influences are numerous, and later, *Inca* elements are introduced. These varied influences from different sources are, however, blended with some original elements into a characteristic Chimu style. Subdivisions of the Chimu Period have been suggested. All of these have not been confirmed, but a basic dual division is apparent, namely, a Chimu subperiod without *Inca* influence (pl. 42) and a Chimu subperiod with *Inca* influence (pl. 49, *d*, *e*). Although this division is based on the presence or absence of known *Inca* elements, it can be confirmed even in the detailed differences of common cooking ollas.

The Chimu Period was a time of great population increase and expansion. This is marked by the first appearance of true cities; and by the numerous and ambitious irrigation projects, which opened up much new terrain. Almost every quebrada in a valley was utilized in Chimu times. Finally, the Chimu Period has a wide distribution from Piura in the north to Casma in the south. Outside of this area, Chimu trade pieces or evidence of Chimu influence are noted from the Coast of Ecuador to the Nazca Valley on the South Coast and even at Machu Picchu, near Cuzco.

The Chimu Period is marked by cities of considerable size, such as Chanchan (pls. 51; 52, *bottom*) near Trujillo, Pacatnamú or Barranca in Pacasmayo Valley, and El Purgatorio in Lambayeque Valley. Of these, the city of Chanchan is the largest and one of the best known. The building of Chanchan was probably started in the Middle Periods, but it was greatly enlarged during the Chimu and *Inca* Periods. Today, the remains cover about 11 square miles (18 km.^{2})

and consist of at least 10 large walled-in units, arranged roughly within a rectangular area with the narrow end toward the sea. Between these units, frequently called "palaces," are irrigated areas, reservoirs, and other ruins. Some cemeteries are found within the city, but others are on the sandy section which borders the ocean. Also near the shore are deep cuts down to the water level in which totora reeds grow.

The units within the city quite possibly represent subdivisions of Chimu society, such as clans. Each unit differs from every other in detail, but all have certain features in common. They are all walled-in, and some have two or three enclosure walls. The Tschudi group covers an area 1,600 by 1,100 feet (480 by 355 m.) and its enclosure walls still stand over 30 feet (9 m.) high. Almost every unit contains a stone-lined reservoir, irrigated gardens, streets, houses of which some had gabled roofs, pyramids, cemeteries, and rows of cut-out cells which have been called prisons.

The building materials are large and small rectangular adobes with rounded tops, puddled clay, or tapia, and a composition material of clay, shell, and stone. In some places, walls are built on rough stone foundations and reinforced with algarrobo logs. The occasional rains on the North Coast have destroyed much of Chanchan. There are still visible, however, traces of wall paintings, walls decorated by niches or by special arrangements of adobe blocks, and walls with relief clay arabesques cut out of a thick clay plaster (pl. 52, *bottom*). The small design units represent birds, fish, small figures, and some geometric elements, all apparently derived from textile patterns.

The arrangement and the magnitude of the Chimu cities suggest a developed social and political organization, and this is partly confirmed by the traditional *Inca* histories. Individual distinctions in rank are portrayed in the ceramic designs and by the degree of elaborateness in burial. Unfortunately, the Chimu ceramics do not depict the wealth of detail found in the Mochica Period.

Typical Chimu graves are unlined shafts which may be marked by long sticks or paddles. Burials are commonly in a seated flexed position, wrapped in cloth. Extended burials or burials flexed and lying on their sides are variants. Burials are accompanied by ceramic and other grave furniture such as metal, cloth, bone, shell, wood, and calabash artifacts. Preservation in the Late Period is much better than in the Early.

Chimu ceramics (pl. 49) are fairly difficult to characterize, since, in spite of a certain basic unity, they vary greatly in shapes and designs. Black ware and monochrome red ware are characteristic, although some painted ware is found, particularly in the *Inca* phase. Many of the vessels are mold-made and are decorated by pressed relief, stipple, modeling, incision, appliqué, champlevé, and paddle marking. Ollas may have crude white designs painted on the orange clay base.

The stirrup-spout vessel is about as characteristic as it was in the earlier Mochica Period. However, Chimu stirrup-spouts are generally rectangular in cross section and have a small modeled monkey or other figure at the base of the spout. Other typical shapes, many of which are derived from the Middle Periods, are: double whistling jars (pl. 60); double-spout vessels with flat connecting bridges; tapering-spout vessels with a flat bridge which connects the spout and a modeled figure; globular bowls with tapering spouts, with and without single flat handles; and globular ollas with flaring or angular rims. Under *Inca* influence other shapes are added, such as: aryballoid jars, both of black ware and with painted designs; vessels with modeled animals at the collar base; collar jars with flat handles; and shallow plates.

The modeling of complete vessels and of small figures is generically related to the Mochica Period, but with considerable decline in the realistic technique. In Chimu ceramics, the figures are stylized and none would ever be called a portrait jar. The animals and birds are difficult to identify. Some scenes are still portrayed in the relief work, but they lack the photographic quality of Mochica.

Textiles of the Chimu Period are well preserved. The development of weaving is also represented by looms, weave swords, weave daggers, and spindle whorls. A characteristic decorative technique is large-area embroidery but not of the over-all type. Tapestries are still common, particularly as belts and borders, and the warp-locked technique is typical. Gauzes, single-faced brocades, and warp-pattern weaves are plentiful. Plain cloth is decorated by painting, tie-dye, and ikat. The fabricated pieces include breechclouts, head bands or turbans, large mantles, and shirts with and without short sleeves.

Copper, bronze, gold, and silver were all utilized in the Chimu Period. Copper and bronze were used for ornaments, but utilitarian artifacts are more frequent, such as points for digging sticks, needles, clubs, and knives. Gold and silver were hammered into goblets, featherlike pieces, masks, plates, elaborate earplugs, beads, and other ornaments. In fact, metalwork is one of the outstanding achievements of this period (pl. 50).

THE LATE PERIODS: NORTH HIGHLANDS

Little is known about the Late Periods in the North Highlands. Middle Period material is, however, abundant and might, in part, have continued into the Late Period times. At the site of Chavín, much unidentified Late remains have been found, including construction work of rough stone facing walls, stone-covered shallow canals, and stone-lined pits. The associated ceramics are mostly plain wares from cooking vessels and simple painted wares. None of the material is particularly distinctive, and all may be contemporaneous with the *Inca* occupation. A variant type of *Inca* pottery is found at the site of San Jerónimo, near Huaraz, and similar fragments occur in the Late levels at Chavín.

At Huamachuco, the Late Period is marked by a decline in stone-building technique. The ceramics are largely of plain ware, ornamented with appliqué, punched, and incised design. There is some painted ware with red and black design on a white-slip base. Slight *Inca* influence is seen in the pottery.

THE LATE PERIODS: SOUTH HIGHLANDS AND BOLIVIA

The late history of the Bolivian altiplano is little known, although apparently the Decadent Tiahuanaco gradually faded into obscurity. Around much of the region are sites with towerlike buildings called chullpas. (See also pp. 505–506.) So far, these cannot be assigned to any particular period, although some persist into *Inca* times. *Inca* materials of good Cuzco style are found in many sites in Bolivia. On the coast of Perú, *Inca* style usually mixes with the Late Periods, but this is not the case in Bolivia. Instead, the *Inca* is found as a pure style unmixed with anything demonstrably local. This confirms, in part, the fact that Tiahuanaco tradition had disappeared before the *Inca* conquest. The South Highlands were one of the first regions conquered by the *Inca*, which may account for the lack of distinctive Late Periods.

THE INCA PERIOD

Inca ethnology, as reconstructed from the chroniclers and as interpreted from the archeological remains, is the subject of another section of the Handbook. Consequently, the discusssion here is limited to the strictly archeological features.

The *Inca* Period is the third widespread horizon which not only covers the total area under consideration but is also found outside of the Perú-Bolivia region. Although the *Inca* Empire achieved its maximum extent only a short time before the Spanish Conquest of Perú, *Inca* materials are found everywhere and mark the end of all archeological sequences. These materials, particularly ceramics, are easily identified because of their distinctive style, which, in spite of the wide distribution, is consistent wherever found. *Inca* influence on local styles is easily noted, and in most regions so-called "pure" *Inca* pieces are found, that is, types similar to those from the unmixed Cuzco area.

Archeological evidence confirms the historical accounts of the center and spread of the *Inca* Empire. That the Cuzco region was the major center is indicated by the numerous important cities found there, and by the quantity of excellent *Inca* stone masonry. Undoubtedly, the Cuzco region was occupied by peoples in pre-*Inca* times, but extensive archeological exploration has so far uncovered virtually nothing except pure *Inca* materials. As mentioned above, the distribution of *Inca* style can be traced by archeological evidence, and *Inca* mixture with local styles is easily demonstrated. In other words, even without historical documentation, the archeological materials would reflect the powerful influence of the *Inca* throughout the whole area and the wide spread of the typical Cuzco style would suggest conquest. Ceramics are the best *Inca* diagnostic, but textiles, metalwork, stonework, and architecture likewise verify this spread. Even the *Inca* emphasis on organization is reflected in the archeological remains. Textiles and ceramics lose their individual character and seem more the result of mass production. *Inca* building styles in the late phases indicate the emphasis on organized unit labor.

Little is known about the origin of the *Inca* style. Some have suggested that it grew out of the *Atacameño* culture in the south, or the Chincha culture on the Coast, but the evidence is not convincing. Excavations in the Cuzco region have so far revealed only one definitely pre-*Inca* period, the Chanapata (pl. 54). This period has now been found at several sites marked by retaining walls of field stones laid in mud, and sunken courts, but no dressed stone or carving. Burials are in a seated flexed position, but without accompanying grave goods. No metals are associated, but bone tools, obsidian points, ground stone, and spear-thrower points are found. The pottery includes a polished black ware with appliqué and incised designs, and White-on-red ware. Flat plates and straight-sided bowls with thickened rims are typical. Chanapata probably belongs with the Early Periods, and certainly does not explain the later *Inca* development.

According to traditional history, the *Inca* had occupied the Cuzco region for at least three centuries. The first part of this long time period, from 1200 to 1438, according to Rowe (this volume, p. 199), pertains to the Early *Inca* phase. The Early *Inca* burials are flexed and cloth-wrapped, and placed in beehive-shaped masonry tombs with corbeled vaults, usually located in cracks in the cliffs. Metal objects are rare, bone is common, and a slate knife is diagnostic. The ceramics have carelessly executed linear and geometric designs painted in black, white, and red.

The Late *Inca* archeological period covers the time of political expansion over most of Perú and Bolivia. A great majority of the artifacts and known *Inca* ruins pertain to this late phase. Consequently, the description of *Inca* archeology which follows refers only to this Late *Inca* Period.

Inca pottery is found in quantity in the Cuzco region and at numerous sites throughout Perú and Bolivia. The finds include grave ceramics and sherds from dwelling-site refuse. In both cases the wares are distinct in shape and design from other archeological periods. Plain cooking ollas are common and have characteristic rim forms. The shapes of the decorated vessels are limited to a few basic forms, with some minor variations. These major shapes are: (1) Aryballoid jars. These vessels have pointed bases on bell-shaped bodies with two vertical side handles, and an animal-head nubbin near the shoulder. The constricted flaring collar has two rim nubbins. Generally, the design is painted on one side only. The size varies from tiny jars to mammoth vessels for water storage. The aryballoid is a unique *Inca* shape and one of the best diagnostics. (2) Straight-sided goblets. (3) Pedestal-base beakers with horizontal handles. (4) Squat, two-handled dishes and bowls. (5) Pitchers and bottles with one or two vertical handles. (6) Shallow plates with a single effigy handle or two small nubbins on the rim. (7) Flat-bottom jugs with faces modeled or painted on the flaring collars. (8) Open-mouth braziers with solid tripod legs. (9) Long-necked bottles.

Ceramics are usually well made, carefully shaped, and highly polished. Modeling is limited to nubbins and effigy handles. Polychrome painting in two to four colors is characteristic. Black, white, and red are typical design colors, with white, yellow, orange, and red as base colors. Most designs are geometric, although some represent birds, animals, flowers, and butterflies. The most common geometric designs are ferns, serrations, bands, diamonds, checkers, triangles, cross-hatch, circles, dots, and small crosses. In brief, *Inca* pottery is easily distinguished from other styles by its designs, color combinations, hard firing, and shapes. Even in mixed styles, the *Inca* elements are outstanding. For example, on the North Coast aryballoid-shape jars may be of typical Chimu black ware, or Chimu stirrup-spout vessels may be decorated with *Inca* geometric designs.

The *Inca* Period in the Highlands has excellent stone masonry, and extensive constructions in villages, towns, and cities. A typical example is the town of Machu Picchu, which is situated on a high ridge overlooking the Urubamba River, not very distant from Cuzco. The town is built almost entirely of stone and consists of house compounds, segregated from each other and possibly representing ayllu divisions; flat areas or plazas; small open-front buildings, identified as temples; boulders called shrines; numerous steps and paths, paved with stone; and a rather elaborate waterworks system.

The houses at Machu Picchu are small, rectangular constructions of one or two stories, with gabled end walls. Some are built of well-dressed stone, some of rough stone. The houses have one or two doorways, each covered with a slab lintel and characteristically narrower at the top than at the bottom. The inside house walls have decorative and utilitarian niches, as well as projecting pegs and rings. Open windows are not very common, but are found in some of the houses. At Machu Picchu, the roofs were probably made of pole frames and thatched. In other *Inca* ruins, corbeled-arch stone roofs are found.

Some of the larger buildings at Machu Picchu are identified as temples. In Cuzco, temples were still in use at the time of the Spanish Conquest. Likewise, fortresses are a common feature af all *Inca* settlements. Above the town of Cuzco is the fortress of Sacsahuaman, built up on one side with three terraces arranged in a long zigzag pattern. Fortresses elsewhere consist of an inner court lined by small houses and surrounded by two enclosure walls.

Stone-faced agricultural and defense terraces are numerous. Likewise, traces of the *Inca* roads are found in many parts of Perú. Some roads are paved with slabs and are as much as 12 m. (about 40 feet) in width. On steep slopes, great steps are cut out of the rock to facilitate travel. Both cable bridges and solid stone bridges were built, although the latter were limited because the true arch was unknown. Along the roads are found the remains of small houses which apparently were used for travelers or sentries. Round or square burial towers are found associated with many ruins, and stone baths are common.

The stone masonry in these various types of construction can be classified in a number of categories:

(1) **Megalithic.**—This type is well illustrated by the fortress of Sacsahuaman near Cuzco. Large slabs and blocks of irregular sizes and shapes are carefully fitted together to form the terraced walls of the fortress. The blocks and slabs are not squared but are joined at different angles and even curves. An over-all plan for building such a wall might have existed, but the actual work of dressing and fitting the massive stones must have been done at the spot. This type of masonry would require well-organized labor.

(2) **Polygonal.**—This type is similar to the Megalithic, but employs smaller stones. Again each stone meets the others at various angles. In one wall in Cuzco, a stone has 12 sides fitted with other stones. These walls were made without the use of plaster or cement of any kind, and hold together by the careful fitting and the weight of the stones.

(3) **Modified polygonal.**—Another type like the above is characterized by the use of small stones of about the same size. However, the stones are not squared, and, consequently, each has to be matched and cut for its position in the wall. This type of masonry has a wide distribution in the Peruvian Highlands.

(4) **Squared blocks with rounded faces.**—Some walls are made of blocks which have been carefully squared for fitting on the sides but with the outer faces left rounded and bulging.

(5) **Dressed-stone blocks.**—A common type of *Inca* masonry, found at Machu Picchu and many other sites, employs dressed rectangular blocks. These are built into a wall with some attempt at coursing, although the actual finishing must have been done during the building, since the blocks are not all of the same size, and the rows are somewhat irregular. Curved walls are sometimes made of blocks of this type, cut to match the curve.

(6) **Pirca.**—Walls of rough or split stones, sometimes laid in clay cement, are common. In fact, the majority of *Inca* construction is of this rough type, while the better, dressed-stone masonry is reserved for special buildings.

(7) **Adobe.**—Squared adobe bricks are found in the Highlands, frequently built on stone foundations. On the Coast, *Inca* buildings almost exclusively are of adobe, possibly because the *Inca* builders employed local assistants who were accustomed to work with adobe but not with stone. In any event, adobe construction is very durable on the dry Coast.

Some adobe or stone walls were covered with a clay plaster which was painted in various colors. Definite wall-painting designs have not been found in the Highland sites, but on the Coast good frescoes are preserved.

The various categories of *Inca* masonry suggest the possibility of a chronological sequence, but no satisfactory one has yet been established. The various styles are frequently combined in the same village and sometimes even in the same building.

Although skilled in stone masonry, the *Inca* neglected carving. Some building walls are decorated with small relief lizards or pumas, but this could hardly be called stone carving. Stone artifacts are, however, numerous, such as: hammerstones; grindstones; carefully made stone bowls with relief designs; stone boxes, some with covers; stone club heads, both round and star-shaped; axes; celts; and bolas. Other stone artifacts were made for religious or other special purposes. Small stone llamas with a depression in the back were apparently used for offerings. Stone counters are found with various compartments, which may have been used for mathematical calculations. Small turquoise figurines are also associated.

Inca burials are found in caves and in bottle-shaped graves. The burials are in a seated flexed position, wrapped with cloth, and accompanied by ceramics and other grave offerings. On the Coast, *Inca* mummy bundles are found in direct graves. Some of the late Coast phases used extended burials.

Metallurgical work was well developed in the *Inca* Period. Silver, gold, copper, and bronze were all employed for the making of utilitarian and ornamental objects. Copper and bronze were worked into pike heads, plumb-bobs, chisels, rings, bracelets, polished mirrors, knives, flat-headed pins (tupus), disks, bells, and needles. Gold and silver were fabricated into small llamas or human figurines, pincers, plates, goblets, and many types of ornaments. Copper objects were gilded, cold-hammered, annealed, cast, and occasionally mixed with gold in a special alloy. The early Spanish accounts show great admiration for the metallurgical techniques of the *Inca*.

Although textiles usually are not preserved in the Highlands, a few *Inca* tapestries were found in a stone box. However, the knowledge of *Inca* weaving is based on the historical accounts at the time of the Conquest and by finds in *Inca* sites on the Coast. Fabricated articles include breechclouts, mantles, waist bands, head bands, poncho shirts, rough blankets, pendant bags, and woven slings. Virtually every weaving technique was known and employed. Elaborate tapestries are made up of very small geometric elements. Warp-pattern weaves and repp are also common. The weaving designs tend to be geometric and have lost the individual character noted in the earlier periods.

Many small wooden objects, including balance scales, weaving implements, daggers, and spears, are found in *Inca* sites, as are also bone tubes, daggers, beads, and carved objects. Wooden goblets are characteristic of the *Inca* Period. Some of these are decorated with incised designs and others display lacquer painting. Many show scenes representing the Spaniards at the time of the Conquest.

A CULTURE SEQUENCE FOR THE NORTH COAST OF PERÚ

By Rafael Larco Hoyle

THE CUPISNIQUE CULTURE

GEOGRAPHY

Cupisnique pottery was first discovered by the author, who found it only in sherds, which were very numerous, in the Cupisnique Valley (map 1, *No. 2*), located between the Jequetepeque and Chicama Valleys on the North Coast of Perú. The name Cupisnique was selected to designate the pottery style and the culture. Cupisnique culture graves in the Chicama Valley are located at the following sites: Palenque, Barbacoa, Salinar, and the haciendas of Sausal, Gasnape, Roma, Santa Clara, Casa Grande, and Salamanca y Mocollope.

Outside of the Chicama Valley isolated Cupisnique finds have been made in Pacopampa, Pacasmayo, Piura, Lambayeque, Chao, and Santa. The specimens from the various non-Chicama sites, although similar to the Cupisnique style, differ in distinct and peculiar characteristics.[1]

CULTURAL AND CHRONOLOGICAL POSITION

Previous to the discovery of the first Cupisnique cemetery at Barbacoa, in 1939, the occasional specimens of the style, in pottery or stonework, which were found in the Chicama region, were classified as "Chavín" after the Highland temple site of Chavín de Huántar. The stone sculpture at this site bears a stylistic relationship to the Coastal finds. It is the opinion of the author, however, that the Cupisnique culture had its origin on the Coast rather than in the Andes. He believes that the important site in the Nepeña Valley was the principal religious center in primitive Perú from which the feline motif in decorative art radiated throughout all Perú.

It should be emphasized that, in considering these particular forms of the feline motif, we are probably dealing with the symbols of a religious cult which was embraced by various peoples. The characteristic local expressions of the feline motif as seen in the art of Paracas, Pacopampa, and Chongoyape are an evidence of this.

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[1] A type of pottery discovered in the Virú Valley, resembling Cupisnique, has been called "Virú-Cupisnicoid" by the author. It appears likely that this type is a fusion of the Salinar culture and Cupisnique influence.

It should further be noted that, while most Cupisnique cemeteries yield grave artifacts which are characterized by the many forms of the cat representation, the feline theme is entirely absent in the cemetery of Santa Ana, which belongs to the Cupisnique culture but is a variant in some respects as the pottery is orange rather than dark in color. Thus it would seem that some of the tribal groups of the North Coast did not accept the feline idea from Nepeña during the Cupisnique times.

To conclude, the Cupisnique culture can be placed in the North Coast sequence as antecedent to Salinar, which was in turn followed by Mochica (Proto- or Early Chimu). Sculpture, ceramics, and the carving of small objects in stone and bone were advanced in development. The sculptural art is of particular merit. Metals were unknown, and the presence of small plates or disks of gold in some of the Salinar-Cupisnicoid tombs can probably be attributed to Salinar influence.[2] Settlements at this time were small groups of houses which may represent some sort of joint family arrangements. The Cupisnique culture contributes strongly in culture elements to the formation of the Mochica culture.

CULTURE

SUBSISTENCE ACTIVITIES

There is no evidence concerning actual agricultural practices or techniques, but several domesticated food plants were known at this early period. Ceramic representations of plants, as well as the original foodstuffs, have been found buried with the dead. These include peanuts, yuca, a cultivated species of caigua, and gourds. It is surprising that maize,[3] potatoes, and other products common to the region in later archeological periods have not been discovered.

In addition to horticultural produce the Cupisnique people added llama and deer meat to their diet. The remains of shellfish and edible land snails testify to the importance of these as a food. Fish were, undoubtedly, another important food item.

It seems reasonable to believe that they domesticated the llama and the dog, as skeletons of both of these animals have been recovered from human graves.

ARCHITECTURE

The few known ruins in the vicinity of Cupisnique and elsewhere in the Valley of Chicama show three types of construction: (1) those of stone that the author considers most ancient; (2) those of conical adobes that pertain to a probable later period; and (3) a subtype of combined stone and adobe.

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[2] Gold objects have been found in association with Chavín-like cultures, or cultures related to the Cupisnique, at Puerto de Supe and Chongoyape; although they have not, as the author states, been found with Cupisnique proper.—EDITOR.

[3] Maize and beans have been found with the related early Ancón-Supe culture to the south.—EDITOR.

The sole pottery vessel of Cupisnique style depicting a house probably corresponds to the stone-adobe subtype. This vessel (pl. 61, *b*) shows a house of simple rectangular plan with a gabled roof. The rectilinear figure seen on one side seems to be a doorway.

On the Pampa de los Fósiles and at Hacienda Sausal (Barbacoa and Palenque) there are remains of walls constructed of fairly large, irregular stones set in mud and fitted with stone spalls.

Adobe structures of the period are built up of conical or odontiform adobes. Walls of adobe were built up by placing rows of conical adobes point to point (fig. 19, *a*) and then by filling the angles and interstices with clay mortar. In the construction of walls of great thickness, a double row of adobes was laid point to point. On these another layer of adobes was alined in reverse in such a manner that their pointed ends touched the bases of the lower row, and likewise fitted base to base with each other. The conical adobes always had their flat bases toward the outside, in order to form a flat surface for the wall. The adobes were laid on a slight incline, so that a transverse cut shows the rows as a series of undulating faces (fig. 19, *b*). The walls were given a uniform surface by coating them with clay plaster. Both solid circular and pyramidal constructions were initiated in this cultural period.

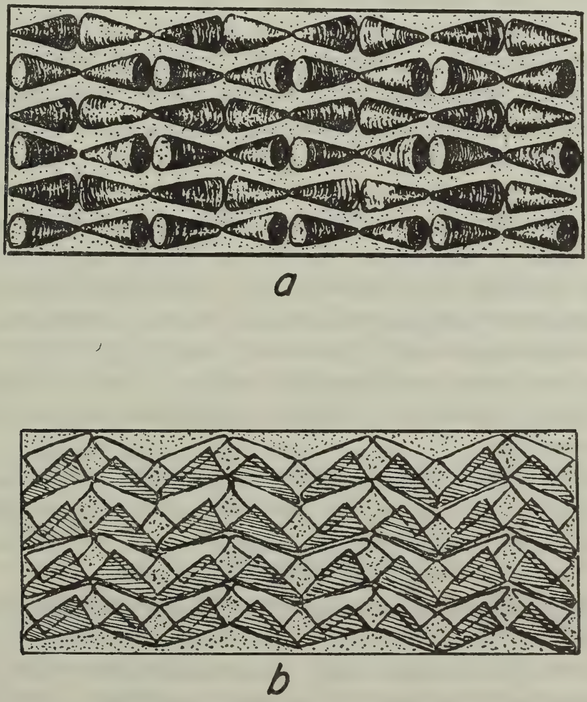

FIGURE 19.—Arrangement of conical adobes in Cupisnique structures. (Redrawn from Larco Hoyle, 1941, fig. 191.)

CLOTHING AND ORNAMENTS

The Cupisnique people wore a simple loincloth, leaving most of the body uncovered. The headdress consisted of a cap with an attached covering for the back of the neck. The bone ear ornaments mentioned below, necklaces of stone and bone beads, and bone rings were common adornment. Necklaces of beads usually had a central piece with magnificent engravings. Some of the dead were found with rings on two, three, and even five fingers.

ARTS AND MANUFACTURES

Ceramics.—Notwithstanding the technical skill displayed in the finished product, the pottery does not attain perfection. A coarse-grained clay and temper were used in making even those vessels which have highest quality. Precise formulas apparently were not followed in the mixing of clays and tempers, so that results were not uniform. Open-kiln firing, a method which appears to be associated only with red or orange-colored pottery, was not employed. Their closed kilns resulted in an imperfect (or reduced) baking of the clay. Only in the last cultural stage of the Cupisnique do red, maroon, dull purplish red, and cream-colored ceramics appear.

Impressions of molds on Cupisnique vessels show that pottery of this period was mold-made much as that of the later Mochica Period.

Ceramic representations (pls. 61, 63, 64) include: anthropomorphs, zoomorphs, and phytomorphs. Vessel forms most common are stirrup-mouthed jars, bottles, globular vessels, and truncated cones. Even houses are depicted.

Designs were incised on the unfired, dehydrated vessel surfaces much as in the carving of bone or stone. Afterward, color was sometimes applied (red, maroon, cream, and black) in the undecorated zones between the incised lines. Contrasts between smooth and rough surfaces were also utilized in pottery decoration. Roughening was accomplished by punctating, scraping, simple hatching or combing, and cross-combing the surface. Small bumps or protuberances were occasionally placed on both smooth and rough surfaces of the vessels.

Geometric motifs are simple, and include and combine straight parallel lines, angles, simple or double chevrons, rectangles, combined and divided diagonally, herringbones, triangles, and rhomboids. Star figures and leaves are also a common design element.

Much of the Cupisnique decorative style suggests a religious symbolism similar to the art forms of the Nepeña Valley. In fact, to eliminate from Cupisnique these Nepeña-like elements would seriously deplete the total range of decorative motifs. The Cupisnique representations of the Nepeña type are, however, noticeably modified.

In modeled pottery, the Cupisnique sculptor reproduced animals, god or demon forms, plants, and dwellings. In his work can be observed the first evidences of naturalistic representation of North Peruvian prehistory. Notable examples are the earliest known facial portrait jar of Perú and a scene composed of a mother nursing an infant (pl. 64, *c*). Much of the elaborate, sculptured funerary ware of the later cultures of Northern Perú undoubtedly were of Cupisnique origin.

Carving in stone and bone.—The Cupisnique craftsman excelled in the carving, sculpturing, and polishing of small objects of stone, shell, and bone. He developed techniques to control very hard rock, such as porphyry, granite, turquoise, lapis lazuli, and quartz. Out of these materials he made beads, amulets, small figures, rings, earplugs and ear pendants (pl. 62, *top*), various receptacles, and mortars. Working with turquoise, which was a scarce medium, he flaked the stone and set the flakes into a thick layer of plaster. Softer media, such as slate and anthracite, were also used; the latter was made into amulets and mirrors, which were ground and polished to a smooth surface, which was sometimes convex to reduce an image.

Bonework includes rings (pl. 62, *bottom*), which were skillfully carved with religious or demonic motifs, beautifully worked beads, earplugs and pendants, combs, spatulas, and needles. Animal bones, especially llama bones, and bird bones were used to make these artifacts.

The techniques developed by the Cupisnique artisans for this exacting and elaborate carving in such durable materials as the very hard varieties of rock are not known.

Textiles.—Balls of cotton yarn and fragments of carbonized cloth have been found in the tombs. The textiles are coarse and open, imperfectly woven, and done in a simple but uneven interlacing technique. Stamps made of pottery are a Cupisnique artifact, but there is no evidence to show that these were used to decorate textiles. It seems more likely that the stamps were used to decorate the human body. Several of the stamps present traces of red paint adhering to them. The bone needles were undoubtedly used to sew the textiles in making clothing.

Metals.—In no Cupisnique Period excavations has metal of any sort been discovered.

BURIAL AND RELIGION

Disposal of the dead was clearly associated with the religious ideas centering around the feline deity. In Cupisnique, a large percentage of the offerings to the dead are sculptured, modeled, or incised representations of the gods, particularly the feline. This is in contrast to the later cultures, especially Salinar, of the North Coast, in which the seemingly highly religious background of the grave offerings was replaced by other themes.

The feline deity or a feline cult is widespread in Perú. When the cat demon appears in the Cupisnique culture it is conceived of anthropomorphically and is represented walking erect on its hind feet as a man. In some cases, cat and human representations appear on the same modeled face: half of the countenance feline and the other half humanized-feline, highly stylized.

The condor and the serpent appear to be other minor Cupisnique divinities.

Burial procedure was more or less uniform, with some variation in the arrangement of the body.

Graves.—The graves were irregular holes excavated directly into the earth. The shape of the grave depended upon the position and the degree of flexure or extension of the corpse. Some graves were circular, others elongated or elliptical. In some graves, the dead had been covered with angular rocks. Depth of the graves varied from 32 inches (80 cm.) to 6 feet (2 m.).

Disposition of the body.—The flexed position was the most common (pl. 69, *top*), the head being turned either to the left or right or doubled forward on the chest; the skeleton was found either on its side, on its back, or face downward; the legs were tightly flexed and usually drawn up together near the chest, but in the case of those individuals placed on their backs, the legs were sometimes spread apart and flexed on each side of the body. Some skeletons were only slightly flexed.

No definite orientation to the cardinal points was observed for either graves or the bodies found within them.

Coloring of the bones.—The bones were commonly colored with a red powder composed of clay with traces of lead and mercuric oxides. The coloring of the skeleton is not complete, although in some instances the bones are so nearly covered with the red pigment as to suggest that some of the burials were secondary. In some cases, the skull was covered with a double cloth beneath which was a thick layer of the red powder. Double burials in a single grave have also been found.

Red seems to have been the funeral color of Cupisnique as it was for the North Coast until the rise of the *Chimu* Empire. In one Cupisnique grave, a small quantity of green powder was found.

Grave offerings.—It is not known whether the dead were clothed for burial, but in the majority of cases artifacts and jewelry were placed with or on the body.

Many grave objects, including pottery vessels, are of a purely ceremonial or religious nature, although some graves contained pottery marked by fire as though in cooking. Vessels were placed at the sides of the body, and sometimes in the hand.

Remains of foods were found in the graves, and shells had often been placed in the dead man's hand.

The various objects and ornaments of stone and bone described above were all recovered from graves.

Dog skeletons are found in graves.

THE SALINAR CULTURE

INTRODUCTION

The first cemetery of the Salinar culture was discovered by the author at the site of the same name in 1941. Previously, four pottery specimens, acquired by the Museo Arqueologico "Rafael Larco Herrera" at Chiclín as a part of a much larger collection, had been set aside as being sufficiently distinctive to be a separate style. More pottery vessels of this new style were obtained by the museum from an "huaquero," and this led to the discovery of the Salinar cemetery in the upper Chicama Valley. The name of the type-site was applied to this heretofore unrecognized prehistoric culture.

GEOGRAPHY

Salinar is located on the Pampas de Jaguey Hacienda, only a few kilometers from the Cupisnique site of Barbacoa. It is a vast cemetery, 228 graves having been encountered within its limits to date. Within the cemetery, graves of the Mochica culture were found superimposed over Salinar burials, and Salinar graves were found which intruded through earlier Cupisnique interments.

As with burial grounds restricted to Cupisnique, Mochica, or Virú cultures, Salinar is situated out of the cultivated land on the sterile slopes of the hills bordering the valley.

Other Salinar type cemeteries have since been found to the northwest, east, and southeast of Hacienda Sausal. A few isolated graves of the culture have also been located between Sausal and the original Salinar cemetery.

In the Virú Valley, east of the port of Guañape, a typical Salinar cemetery was isolated, and in the same valley, adjacent to Hacienda San Ildefonso, some curious "hybrid" vessels were recovered which have resemblances to both the Cupisnique and Salinar styles. Three vessels from the Santa Valley are known which appear to be variants of the Salinar style; however, the provenience of these particular specimens is open to some doubt.

At present, the area in which Salinar-type finds have been made centers between Hacienda Pampas de Jaguey on the north and Hacienda Sausal on the south, a sector on the right side of the upper Chicama Valley. The only other important location for Salinar is Guañape in the Virú Valley.

CULTURAL AND CHRONOLOGICAL POSITION

The Salinar culture of the North Coast of Perú constitutes an important chronological and evolutionary step between the Cupisnique and Mochica cultures. In it we can observe the course of development of the ceramic and pictorial arts from one stage to the other. Except for the carved bone spatulas, which were done in a manner reminiscent of Cupisnique, only two feline representations were found among all the Salinar artifacts. These were pottery vessels. For some reason, as is the case with the Cupisnique culture site of Santa Ana, the Salinar peoples did not incorporate the feline motif into their decorative art. Its absence makes it likely that the feline symbolism was not a part of their religious beliefs.

In the evolution of social aggregations of the North Coast of Perú, Salinar takes its place among the cultures of limited geographical spread and political dominance which existed before the formation of the great organized regimes. But the people of Salinar contributed many valuable cultural elements to the formation of the first great civilization of the north, the Mochica.

CULTURE

SUBSISTENCE ACTIVITIES

Maize, which was not found in the Cupisnique culture, has been recovered from Salinar graves. Squash and gourds are also recorded for Salinar. Pottery representations of the lúcuma and the pepino indicate their former use as foods.

There are, however, no life representations or any other evidences that give a clue to types of agricultural practices that might have been employed by these people.

There are various sea shells, including clams and choros, in the graves, and there are shells of land snails. Skeletons of birds found with the dead suggest that they also served as food. Artifacts of llama bone are known for this period, and it is likely that this animal was eaten.

CLOTHING AND ORNAMENTS

There is considerable emphasis on headgear in Salinar clothing. Judging from pottery representations, there was a cap that was adapted to the form of the head. The cap was belted with a coiled strip of cloth or fibers. This coil or belt for the cap crossed, in some cases, in the front, with the two ends fastened upon the head. Sometimes the ends hung down over the back. There were also conical caps similar to the present-day "chullo"; and still others of a rectangular form, like a mitre, with a visor attached.

The hair was usually combed in bangs, down to the eyes in front and cut back into a step in front of the ears. On the sides and back it was usually trimmed off at the level of the neck but sometimes hung down to the shoulders. A variation was a headdress where the hair was tied at the top, giving the head a conical appearance.

There is no evidence for face painting, but three vessels show individuals with incisions beside the eyes, nose, and mouth, which suggest that the Salinar people adorned the face with skin incisions, or which may indicate a beard, mustache, etc., etc.

Clothing covering the body is never well depicted. Some figures which do not show the genitalia may be the individuals covered with a long shirt of some sort. However, from fragments found on actual bodies of the dead, it is certain that clothing was worn.

They wore both circular and tubular ear pendants, finger rings, nose pendants, and necklaces of stone, shell, or pottery beads. These beads were cylindrical, spheroid, or truncated-conical in form. They also wore necklaces composed of bell-like pieces of pottery and pottery phalli. Bracelets were composed of small, cut snail shells.

ARCHITECTURE

No actual buildings have been identified as belonging to the Salinar culture, but two pottery vessels give considerable detail upon house types. One of these shows a round tower supported by step-designed pillars. A decorative frieze of continuous loops, which are perforated in the center, surrounds the tower. The roof is flat. The second house is four-sided and pent-roofed with an open front (pl. 66, *c*). The stairsteps, or stepped symbols, are the vertical supports on each side, and they are fastened together with beams. A crosspiece, circular in cross section rests upon these beams, and in turn, holds up the roof. The roof slopes toward the rear of the house. A great central upright in the front-center of the house helps support the crosspiece.

From these two ceramic representations, the development of a quite definite architectural style is observed. It is, unfortunately, impossible to know what materials were employed.

ARTS AND MANUFACTURES

Ceramics.—On first view, Salinar ceramics (pls. 66, 67) seem rather crude and simple; but closer inspection shows a marked technological improvement over Cupisnique pottery. The paste was carefully prepared with sifted ingredients. Firing usually resulted in an even red color throughout. This indicates the employment of pottery ovens permitting abundant oxidization during baking.

Ninety-three percent of the ware studied has a dull, natural red surface resulting from the firing; the remaining 7 percent is black, dark red, purple, or dark brown, and has a petrous appearance as does the Cupisnique pottery. The darker vesssels have been burnished with a smoothing implement, and some of the red vessels were apparently coated with a film which upon firing resulted in a surface finish similar to that of the transitional Cupisnique or Cupisnique-Salinar pottery.

Molds were used in manufacture, and handles and spouts were attached to the vessels later.

Bottle forms are the most common, although there are others. The principal shapes and their variations are given below:

I. Stirrup-mouthed vessels.
    A. Human representations.
    B. Zoomorphic representations upon truncated-conical or semi-globular forms.
    C. Globular pitchers, truncated-conical or conical.
    D. Stirrup-mouthed vessels with triple conduits.
II. Bottle-shaped jars with cylindrical spouts and flat, semicircular handles.
    A. Anthropomorphic, entire body.
    B. Zoomorphic, entire body and animal-head representations.
    C. Globular forms.
    D. Globular forms, elongated.
    E. Truncated-conical, double truncated-conical, and conical forms.
III. Jars with spout and bridge handle, with a sculptured figure, upon globular or truncated-conical pitchers. (In this type appear the same variations as listed for the two types above.)

Among the bottle forms there are some with a short, broad spout which may be classified as "porongos." They have a globular or truncated-conical form and cylindrical, semicircular handles. There are also little or miniature globular ollas, truncated-conical vessels, and some with human heads and forms.

Surface decoration of the pottery was by both incising and painting. The Salinar potter effected the incising while the clay was wet and soft. The old feline motifs, so prominent in Cupisnique, have disappeared in Salinar decoration. The geometric motifs, however, continue, and are a little more developed and perfected than in the earlier period. Incisions are used to aid in anthropomorphic and zoomorphic delineations; and the roughening of the vessel surface, and the addition of small nodes or protuberances are additional techniques of nonpainted decoration.

Both red and white pigments were used to decorate the Salinar pottery, and were applied after partial dehydration and before firing. As noted above, most of the vessels do not have a slip or a base. The paint, usually white, was applied with a thick brush. The same geometric and other simple designs executed in incising were also made with paint. The stepped symbol, loops, stars, wavy lines, parallel arched lines, and volutes constituted the principal motifs of the Salinar artist. Paint was frequently used to bring out details of modeling as well as to draw independent designs. It is interesting to note that in this period are, seemingly, the beginnings of the ceramic paint-

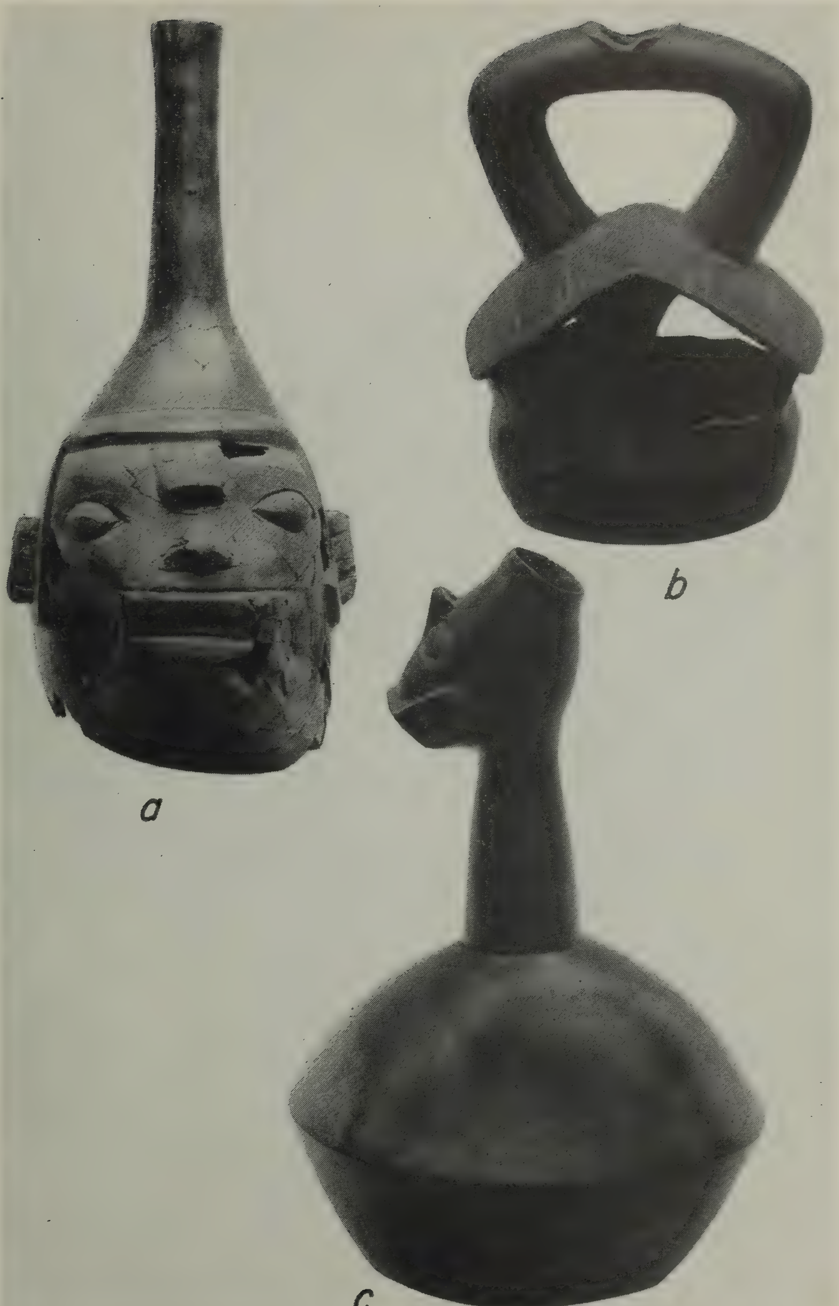

Plate 61.—**Cupisnique pottery.** *a*, Feline representation with slight anthropomorphic resemblance; *b*, house with roof sloped in two directions; *c*, bottle with anthropomorphic (?) head at top. (Courtesy Rafael Larco Hoyle.)

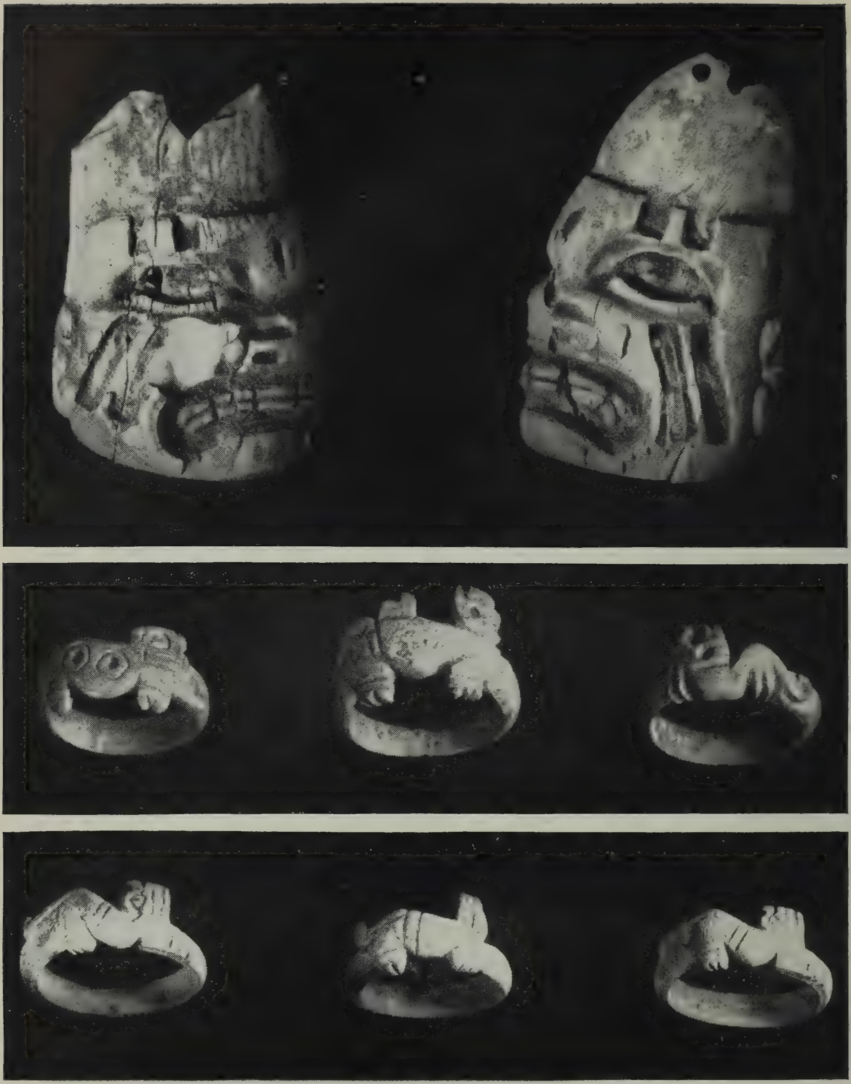

Plate 62.—**Cupisnique ornaments of shell and bone.** *Top:* Ear pendant of shell which had been inlaid with turquoise. *Bottom:* Bone rings. (Courtesy Rafael Larco Hoyle.)

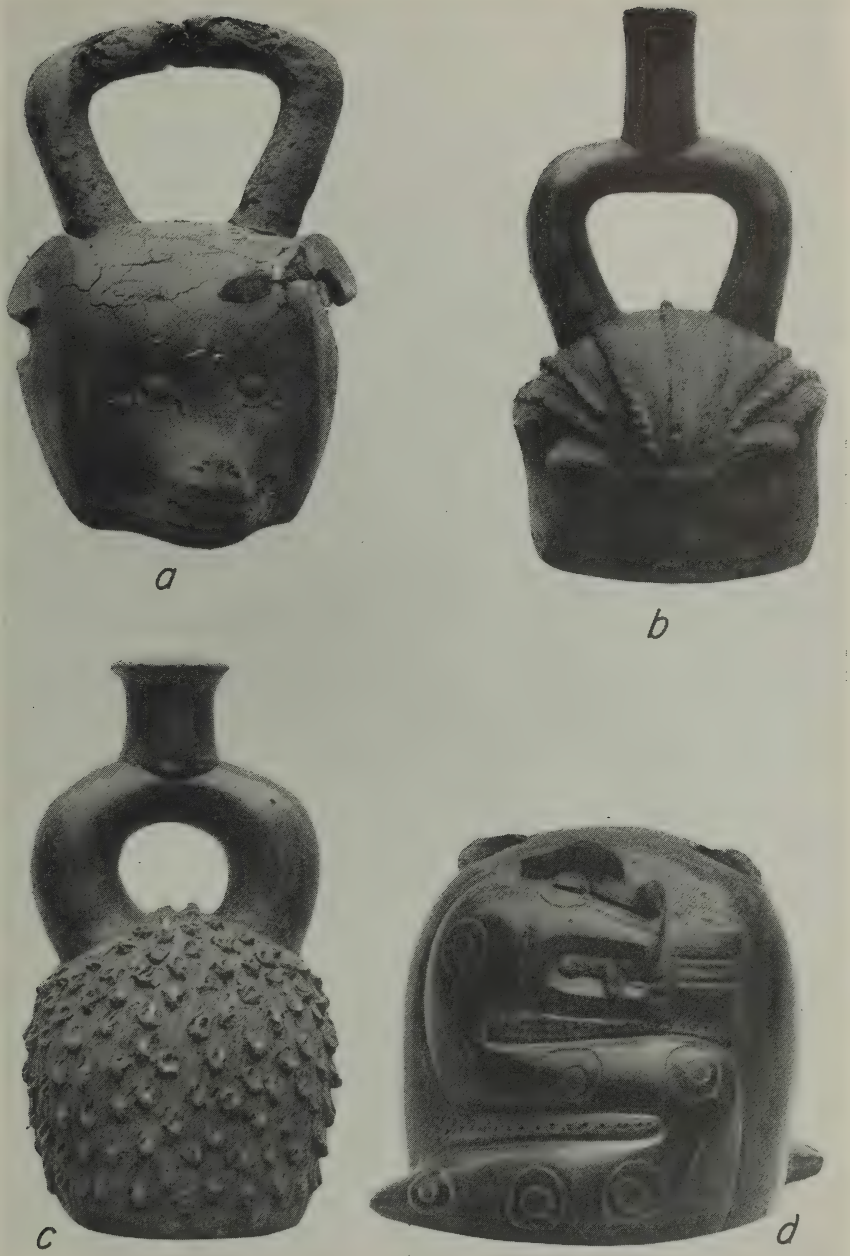

PLATE 63.—**Cupisnique pottery.** *a*, Fox; *b*, mollusk representation, probably *Spondylus pictorum:* *c*, roughened surface with protuberances; *d*, red ware jar, representing feline serpent, minor divinity of Cupisnique. (Courtesy Rafael Larco Hoyle.)

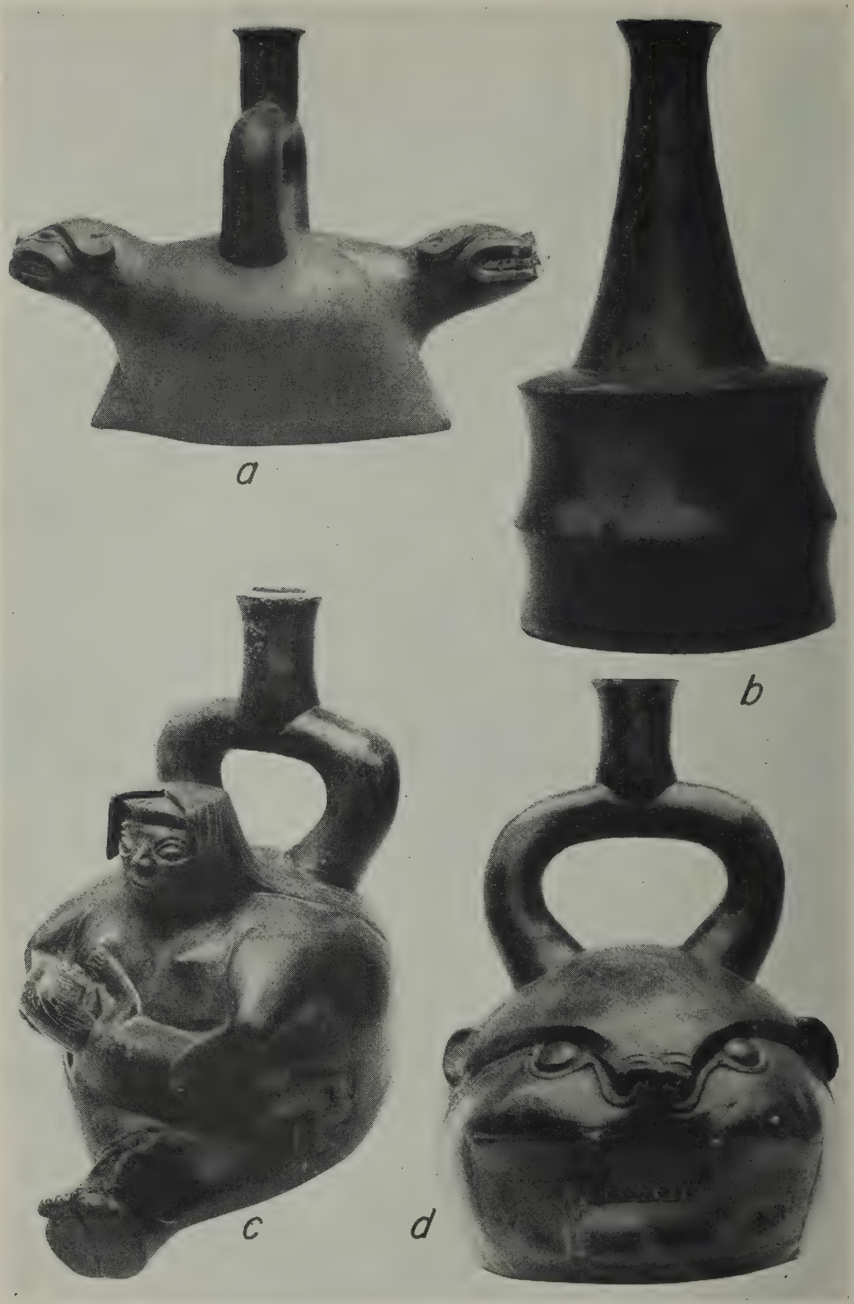

PLATE 64.—**Cupisnique pottery.** *a*, The feline serpent; *b*, geometric bottle form; *c*, woman nursing child (a unique example); *d*, feline god. (Courtesy Rafael Larco Hoyle.)

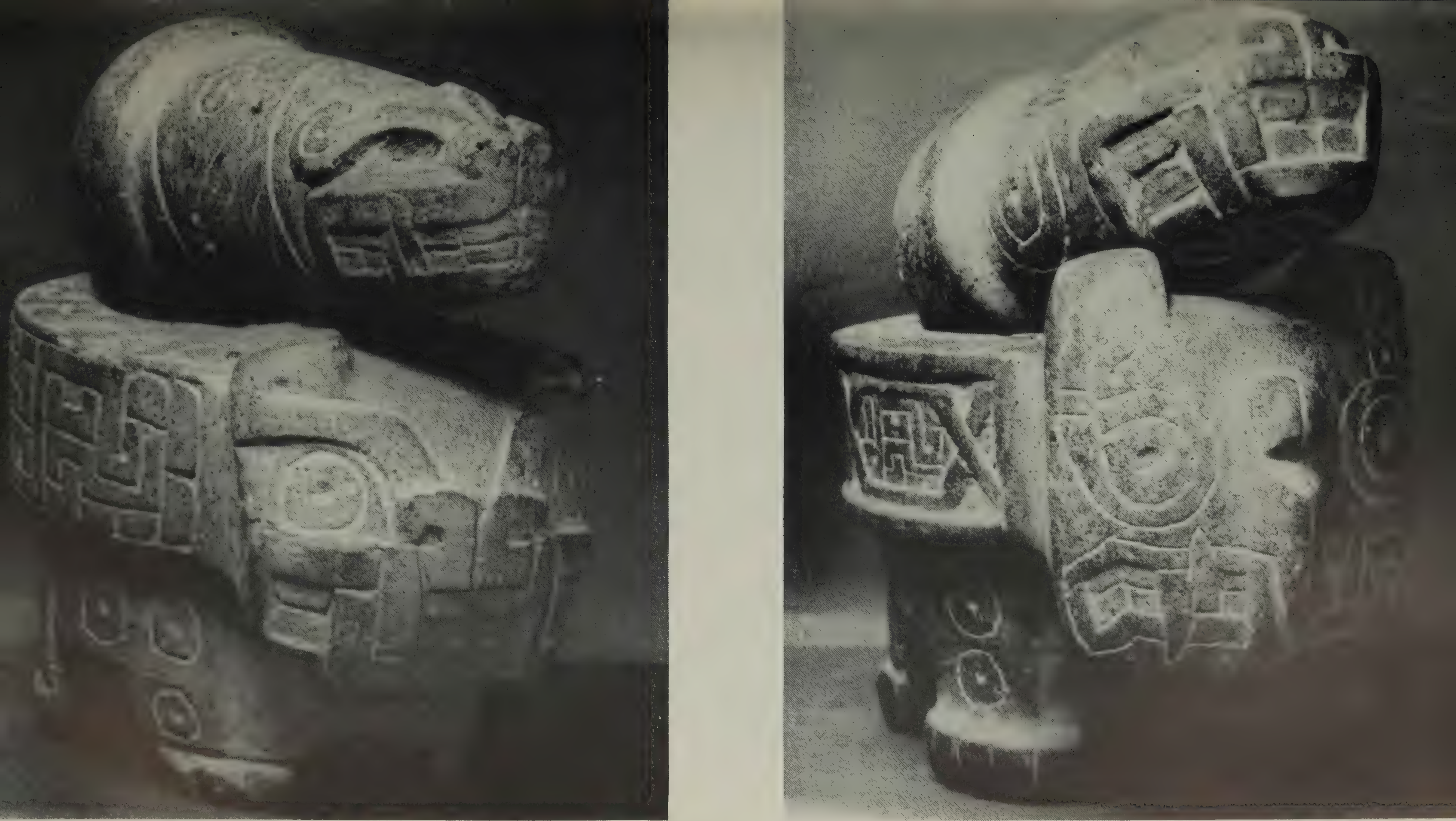

Plate 65.—**Carved stone mortars from Pacopampa.** *Left:* The feline deity in a style similar to that of Cupisnique. *Right:* The feline owl, divinity of Pacopampa, which does not appear in Cupisnique. (Courtesy Rafael Larco Hoyle.)

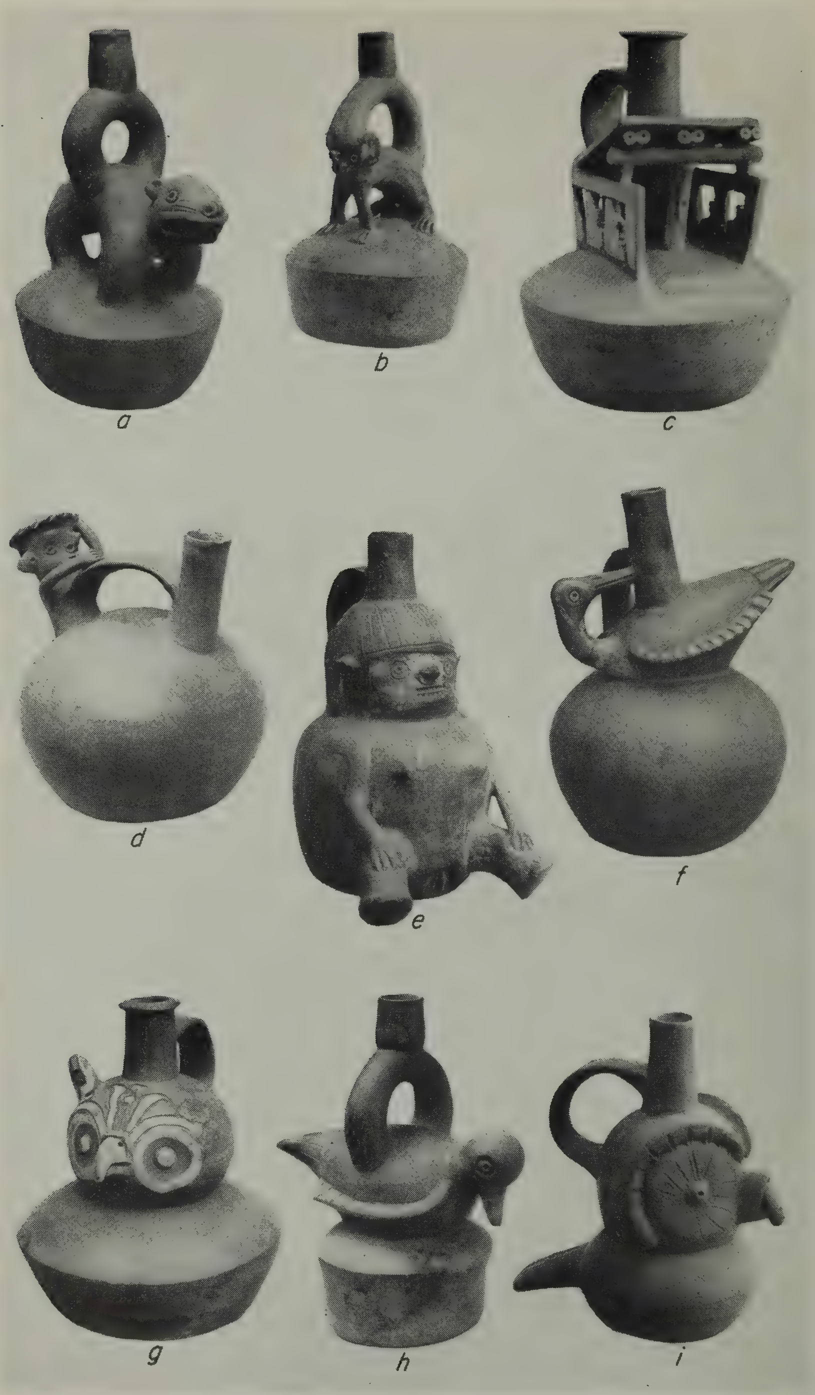

Plate 66.—**Salinar pottery.** *a*, Dog or feline; *b*, monkey; *c*, four-sided, pent-roofed house; *d*, anthropomorphic head-and-spout with flat bridge-handle; *e*, woman; *f*, unidentified bird; *g*, stylized owl head; *h*, dove; *i*, owl. (Courtesy Rafael Larco Hoyle.)

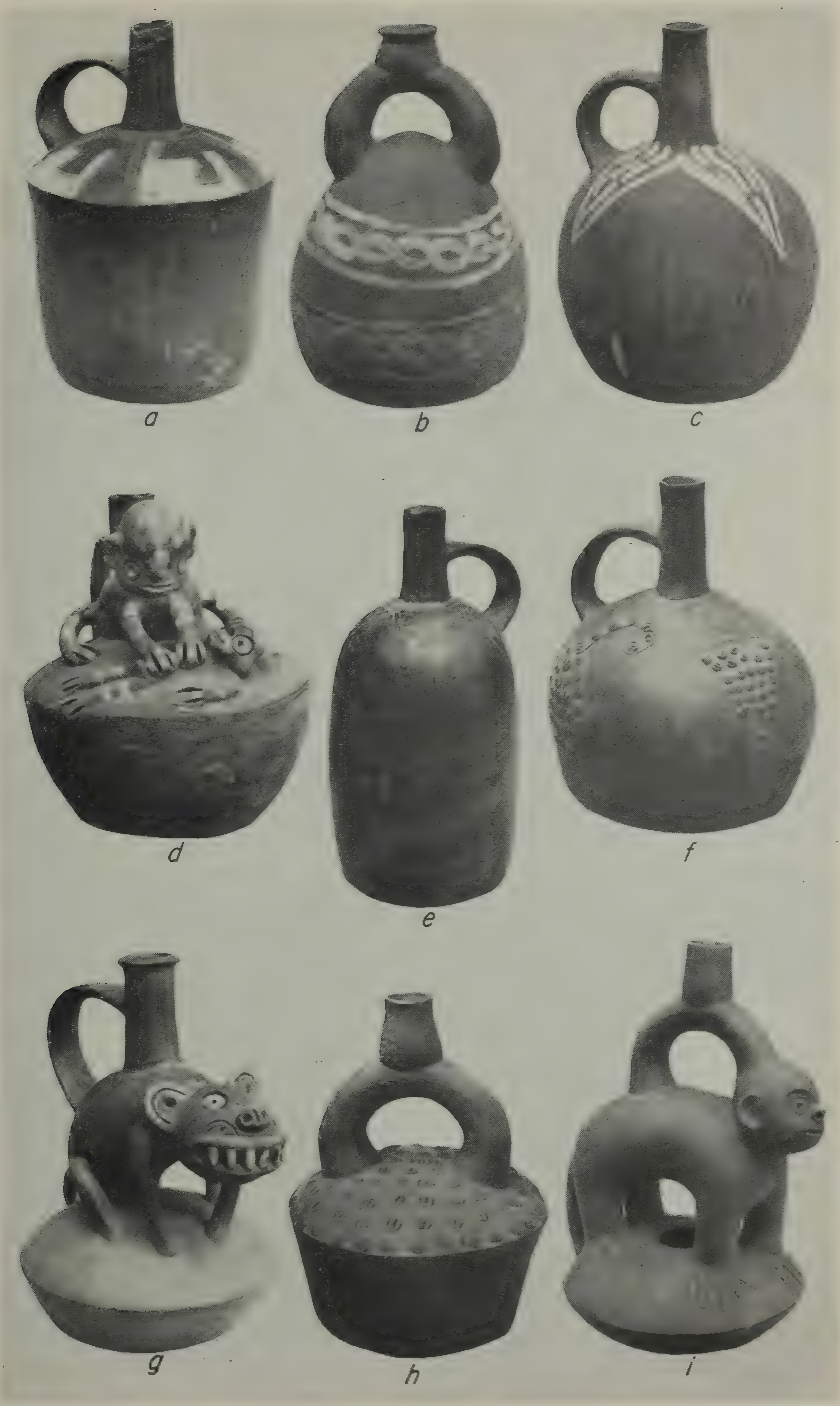

Plate 67.—**Salinar pottery.** *a*, Single-spout jar with flat handle and incised and painted stepped design; *b*, incised and painted decoration; *c*, single-spout jar with flat handle and white design; *d*, fantasy shaman attending a patient; *e*, incised vessel; *f*, roughened, noded, and incised surface; *g*, feline; *h*, noded vessel; *i*, monkey. (Courtesy Rafael Larco Hoyle.)

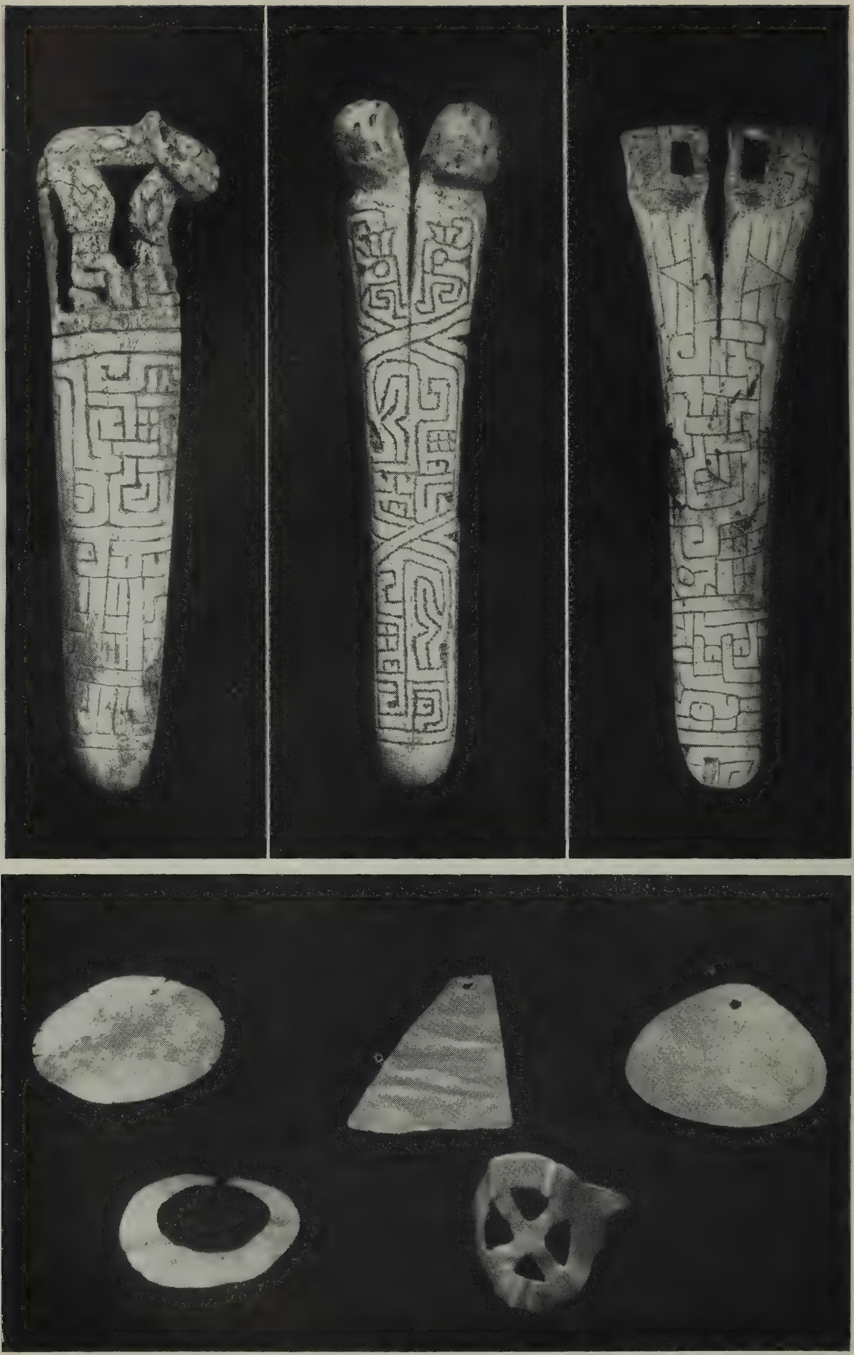

Plate 68.—**Salinar Period bonework and metalwork.** *Top:* Three bone spatulas incised in a style suggestive of Chavín or Cupisnique. *Bottom:* Nose ornament, ring, and sheets of beaten gold. (Courtesy Rafael Larco Hoyle.)

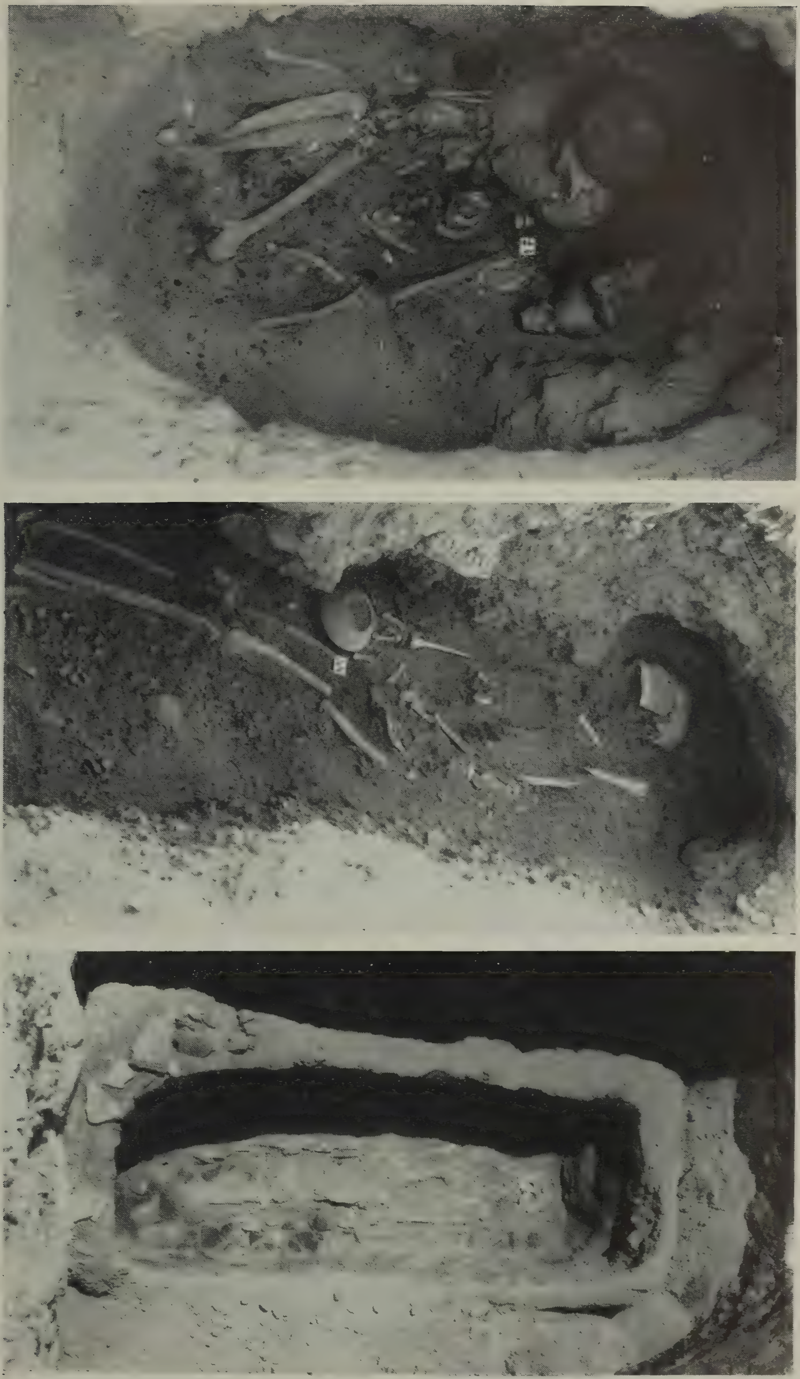

Plate 69.—**Burial types of the North Coast of Perú.** *Top:* Cupisnique. *Center:* Salinar. *Bottom:* Mochica. (Courtesy Rafael Larco Hoyle.)

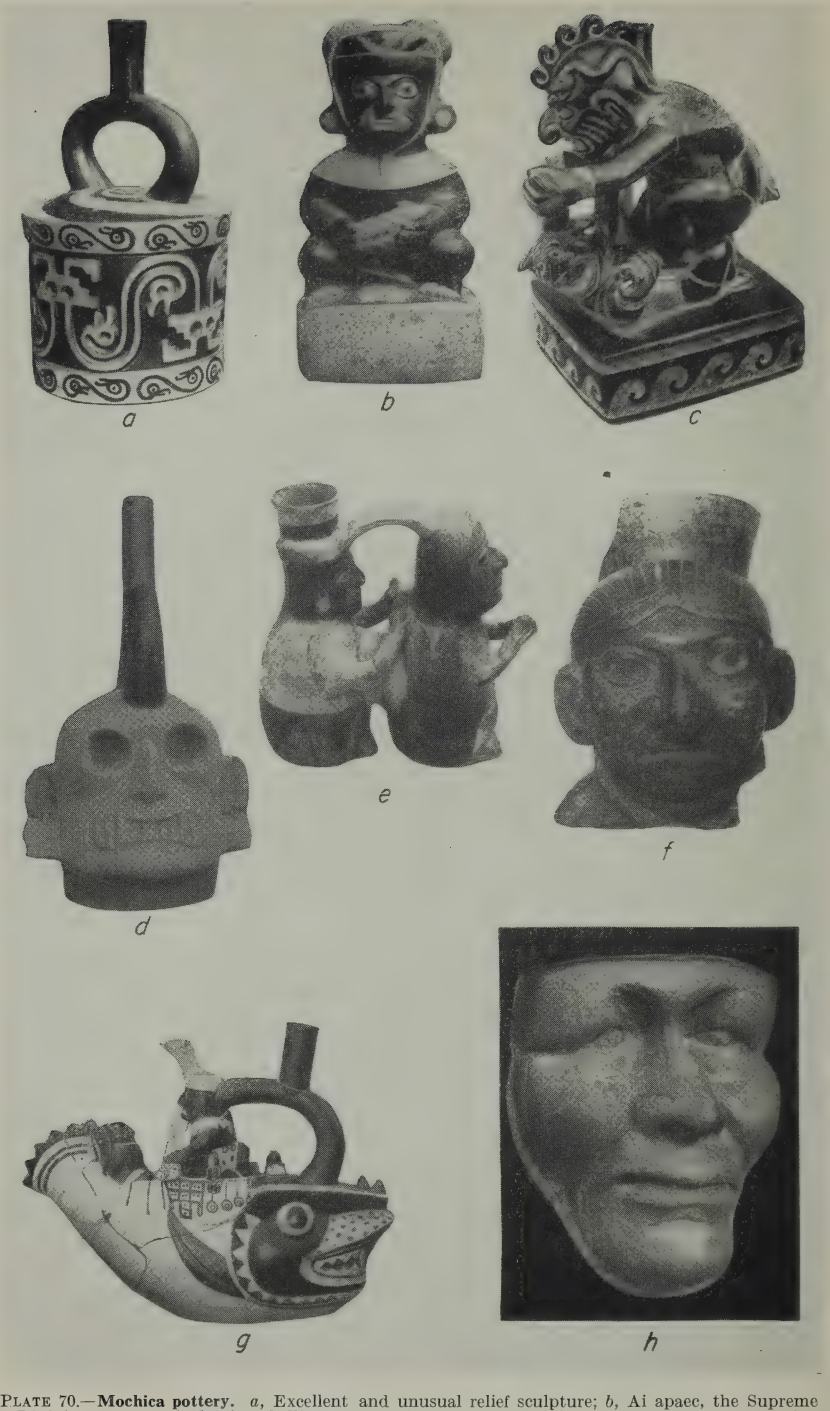

PLATE 70.—**Mochica pottery.** *a*, Excellent and unusual relief sculpture; *b*, Ai apaec, the Supreme Divinity, as an agriculturist, shelling corn; *c*, the Supreme Divinity conquers a demon vampire; *d*, death's head of Ai apaec; *e*, removing a tumor; *f*, representation of a face pockmarked by disease; *g*, the earthly divinity sails the seas; *h*, portrait study. (Courtesy Rafael Larco Hoyle.)

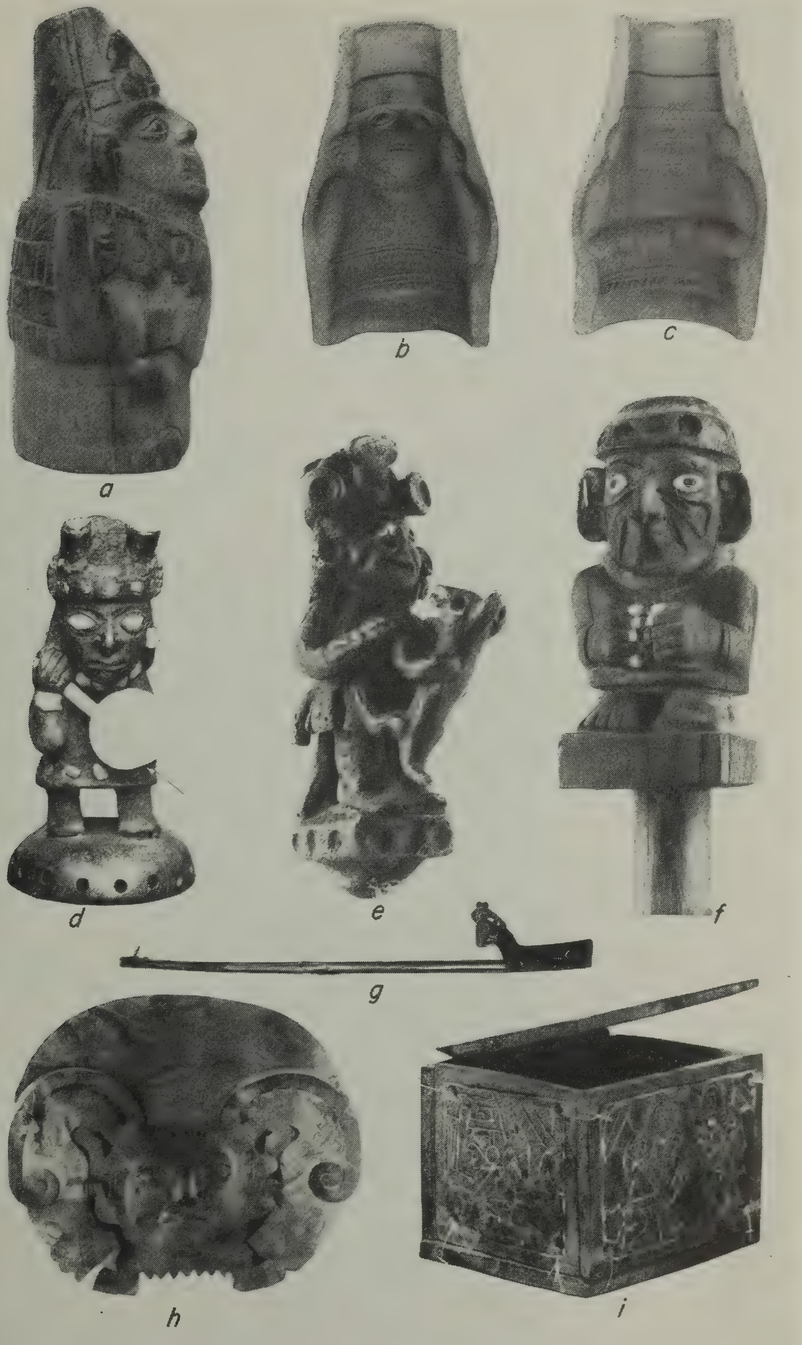

PLATE 71.—**Mochica craftsmanship.** *a*, Pottery model, used in making a pottery mold; *b*, *c*, two sides of a mold made from a model; *d*, warrior carved in bone, red with mother-of-pearl inlays; *e*, copper casting, a warrior attacked by a dog; *f*, wood sculpture with mother-of-pearl inlays; *g*, spear thrower wrapped with gold; *h*, head ornament of beaten gold; *i*, stone box with engraved figures. (Courtesy Rafael Larco Hoyle.)

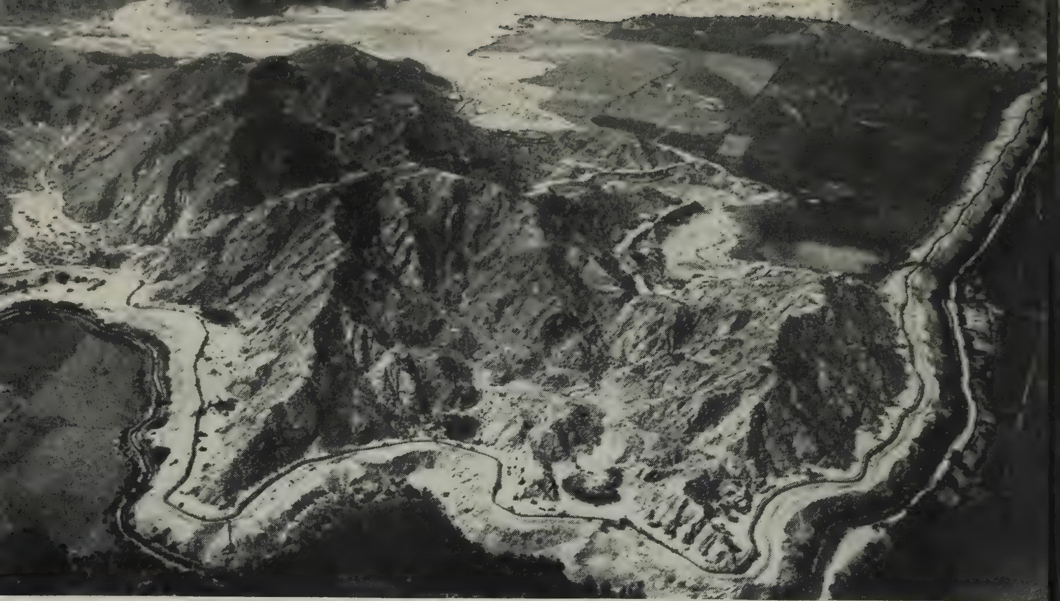

PLATE 72.—Mochica construction and architecture. *Top:* Aerial view of aqueduct of Ascope. *Bottom:* Adobe column at Tambo Real. (Courtesy Rafael Larco Hoyle.)

ing art that was later to crystallize in the Mochica culture with its expertly drawn red and white designs.[4]

Although anthropomorphic sculpturing and modeling of Salinar pottery have not attained to the Mochica level of style, the bird figures, animals, plants, and houses show a continued advancement in technique. In the human figures, as in most of the representative pottery of the region, the form of the body is subordinate to the vessel shape. Because of this, heads are out of proportion, so that greater capacity can be gained for the vessel. In making the features, the hair is done with incised lines; the eyes made by placing a dot in the center of a simple incised circle, by an incised diamond, or by deeply indenting a small sphere of clay; and the nose is usually a small protuberance with holes in the sides. The mouth is a long incision, or double incision, with small pieces of clay inserted or with indentations to serve as teeth. The ears are represented as very large. Breasts and genitalia are indicated in a disproportionate size. Some attempt was made to give anatomical proportions to the lower extremities; but the arms are thin and poorly made. Fingers are very crudely executed with incisions.

In the sculpturing there is a tendency to depart from naturalism and stylize certain features; yet, in the animals and birds the artist undoubtedly tried to capture natural qualities and attitudes. Some of these are: cats, monkeys, rats, owls, parrots, doves, hummingbirds, and other birds, unidentified.

Plants include the cactus, lucuma, and pepino.

The appearance of pornography in modeled ceramics, because of its important position in Mochica art, should be especially noted. The scenes depict natural coitus, and there is no perversion.

Carving in stone and bone.—A few bone spatulas (pl. 68, *top*), with incised designs somewhat similar to those of Cupisnique carved upon them, appear to be the only tie to the outstanding carving of the earlier period. These artifacts do not have the same perfection, nor do they treat the design motifs as in Cupisnique.

Sculptured stone has not been found in connection with Salinar. Beads of turquoise, and other stones, are of the most simple shapes and unadorned.

Textiles.—The fragments of cloth from the graves which have not disintegrated are of a tight warp and of a textile type commonly called "lawn." The weave is simple interlacing of one or two strands, which are well twisted and uniform. The material has not been identified, but is probably wool or cotton.

Needles, both of bone and of wood, were presumably used in sewing garments.

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[4] See Bennett, this volume, for reference to the "White-on-red" style, pp. 92, 97.

Metals.—Thin, hammered gold objects and jewelry are found in Salinar graves. This is the first appearance of metal in the culture sequence of the North Coast of Perú. Most of the gold was beaten into thin sheets, and rudimentary openwork forms were made. However, the technique of soldering gold was known.[5]

A ring, a nose ornament, and circular, oval, and trapezoidal fragments of gold were recovered from the graves (pl. 68, *bottom*). All objects weighed less than 2 gm. each.

In one tomb a small ovoid sheet of metal was found, covered with a greenish oxide. This suggests that the Salinar artisans had mixed copper with gold, or that they had used an impure gold. Unfortunately, this fragment is so small that it would have to be destroyed to make a quantitative chemical analysis.

BURIAL

A very definite mode of burial was practiced. Bodies were interred at full length with the legs extended and slightly crossed (pl. 69, *center*). Usually, the individual lay on his right side and was supported in this position by pottery vessels and rough stones. Arms were extended at the sides, or, in some instances, the left hand was placed over the pelvis. Sometimes the legs were slightly flexed. The degree to which this pattern of arranging the body was followed is indicated by the fact that only 2 percent of all burials recorded had the bodies placed on the left side.

The outline of the grave was an elongated ellipsoid. Often the bodies were placed along the side wall of the grave and were then covered with great slabs of stone leaned against the wall, forming a sort of crude sarcophagus. Or, as a variant of this, the wall of the grave was undercut and the body and accompanying funerary offerings placed in the niche and sealed off with stone slabs.

Occasionally, two individuals were placed in a single grave. In these cases they were extended side by side usually back to back, with one at a slightly higher level (6 inches or 15 cm.) than the other.

From one to three pots were placed in the grave with each body. They were put either at the head, thorax, shoulders, legs, arms, or feet.

Red powder was found in most of the graves but not as small bundles of powder as in Cupisnique. It was scattered in chunks or lumps within the grave or was placed in special receptacles. In color, it is not as vivid a red as that found in the Cupisnique graves, being more of a dark red or sometimes a purplish red.

The dead were covered, or partially covered, with cloth, and adorned with necklaces and bracelets. In the mouths of some of the skeletons were found the small oval or circular sheets of gold, possibly placed there for magical purposes. It is to be noted that this custom was accentuated in the Mochica culture.

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[5] This is one of the earliest evidences of soldering from Perú. See Root, volume 5, Handbook of South American Indians.—EDITOR.

In addition to pottery, other funerary offerings include: gourds that had been filled with meat, pumpkin seeds, maize, mollusks, land snails, birds, dogs placed at the feet of the dead man, conical pieces of white chalk, mortars, fragments of rough quartz, and round stones, usually white in color.

The burial form of Salinar antedates the Mochica burial type in which the dead person is placed in the grave at full length but on the back. It is likely that the stone-slab tombs of Salinar are the precursors of the Mochica stone-lined box tombs. It should be mentioned that the burials of Salinar-Cupisnique type, found in the Virú Valley, are not of the Salinar type but the flexed type of burial which characterizes Cupisnique proper.

Salinar bodies follow no very definite orientation in the graves with reference to the cardinal directions; however, the majority of them are oriented within the arc of 35° to 65° west of magnetic north.

SHAMANISM

The first representation of shamanism or medical practices for the North Coast of Perú are recorded in Salinar. One vessel shows a seated individual with another person before him who is reclining on his back. The seated individual has placed his hands upon the patient in much the manner of the Mochica shamans who are shown in the pottery of that period (pl. 67, *d*).

THE MOCHICA CULTURE

GEOGRAPHY

The Mochica territory includes that part of the Coastal belt of North Perú lying between lat. 7° 36′ and 9° 20′ S., and between long. 78° 51′ and 79° 28′ W. It embraces the rich valleys of Chicama, Santa Catalina (Moche), Virú, Chao, Huamanzaña, Santa Ana (Lacramarca), and Nepeña, an area of approximately 6,585 sq. km. (about 1,600 sq. miles).

Mochica pottery has been found north of Chicama, in the Valley of Jequetepeque, only in small quantity. In the region of Pallasca, in the Sierra of the Department of Ancash, there are vessels and stone objects showing Mochica influence. These would indicate that Mochica influences, carried by conquerors or traders, reached well into the interior.

CULTURAL AND CHRONOLOGICAL POSITION

The cultural elements of three periods—Cupisnique, Salinar, and Virú Negative—all contributed to the make-up of the Mochica culture.

In analyzing the Mochica ceramics, the author sees evidence of four progressive periods. The first two are represented only in the Chicama and Santa Catalina Valleys; and the last two are found in all of the North Coast valleys of the Mochica territory. It is the author's opinion that the Mochica style originated in the Chicama Valley.

Throughout the four Mochica ceramic periods are seen the rise, evolution, and decadence of the arts. Beginning in naturalism, the trend is toward stylization, followed by a rejuvenation, and then a degeneration.

During the final stage of decadence, there appeared a new culture and people in North Coastal Perú. These people, of whose origins we are not sure, left behind a pottery of slightly modified Tiahuanaco style. Their influence appears impressed upon the various institutions and ways of life of the previous Mochica.

A fusion of this Tiahuanaco style with the Mochica left a hybrid pottery (Kroeber's Cursive), which is the true Middle Chimu style because it links the Mochica with the Late Chimu.

CULTURE

SOURCES OF INFORMATION

This summary is based principally on observation of over 30,000 ceramic vessels, many of which are realistically modeled and painted to represent a wide variety of cultural activities, and on a study of many other Mochica artifacts of metal, stone, wood, and bone. These objects are in the Rafael Larco Herrera Museum of Chiclín, Perú. The summary also includes information obtained by the author during many archeological excavation and reconnaissance trips in the North Coast area. The ethnology of present-day groups, both of the Coast and Highlands of this region, supplements the archeological data.

SUBSISTENCE ACTIVITIES

Agriculture.—The Mochica people were advanced agriculturalists. Their agricultural activity is evident today not only in the rich valleys that they dominated but also in the marginal areas that they brought under cultivation through great irrigation works. In all the valleys there are canals and aqueducts, some of which are still utilized today. The canal of La Cumbre, 113 km. (about 75 miles) long, is fed from the headwaters of the Chicama River and irrigates the fields adjacent to the site of Chanchan. In order to cross ravines which interfered, numerous aqueducts were built, following the plans of canals that were traced for the purpose of irrigating new lands. The most important are those of Ascope (pl. 72, *top*) in the Chicama Valley, Mampuesto in the Santa Catalina Valley, and Tambo Real in the Santa Valley. The aqueduct of Ascope, which was constructed by sedimentation, has a length of 1,400 m. (about 4,500 feet), a cubic content of about 785,000 cu. m. of earth, and a weight of more than two million metric tons. This Mochica aqueduct is one of the master engineering works of ancient Perú.

The Mochicas employed a system of straight furrows and small leveled plots with retaining earth banks for irrigating crops on the flat lands, and curvilinear furrows for irrigating sloping terrain. For fertilizer they used bird guano from the islands.

The principal plants cultivated were maize, beans, peanuts, potatoes, yuca (manioc), sweet potatoes, ulluco, aji, maize, pumpkins, gourds, chirimoyas, custard apples, pacae, granadillas, lúcumas, pepinos, coca, and cotton. In addition, other plants were used for medicial purposes, including varieties of cactus, habillas, ashango, maicheles, and many other curative herbs.

Hunting.—The Mochicas hunted to obtain meats to supplement the plant foods. Nets and the estólica (spear thrower) and dart were used to kill deer; the blowgun and spear thrower for birds, such as doves and wild ducks; and maces or clubs for sea lions. The domesticated llama and guinea pig were eaten. The Mochicas gathered land snails and hunted iguanas as additional foods.

Fishing.—The Mochicas fished in the ocean from large balsas, much like those now seen on Lake Titicaca. They also had smaller balsas similar to the small totora balsas, or "caballitos," still used today by the native fishermen of the Coast. The construction of these little craft appears to have remained unmodified through many centuries. The principal fishing equipment included nets with gourd floats, unbarbed fishhooks of many sizes, and wooden harpoons used for large fish. Pottery representations indicate that the Mochicas caught fish ranging in size from the shark to the anchovy. From along the rocky beaches, they collected shellfish, many species of which have either since disappeared locally or were brought in from farther north in Mochica times. *Spondylus pictorum* and *Strombus galeatus* are examples of the latter.

Food preparation.—The Mochicas prepared various dishes of meats mixed with vegetable foods. In a container consisting of two gourds fastened together with a cord they placed doves or guinea pigs over maize. They cooked guinea pigs on small spits over hot coals. They ate from gourd, pottery, and silver food containers with sticks sharpened at both ends or with pottery spoons. Large, bell-shaped vessels were receptacles for kitchen refuse.

Chicha was a fermented maize drink and was served in gourd, pottery, or silver containers.

Domestication of animals.—The llama and the dog were the principal domesticated animals. In addition, the Mochicas captured young deer, pumas, monkeys, and parrots in order to have them as household pets.

ARCHITECTURE

General architectural knowledge also evolved from Cupisnique into Mochica. The Mochicas did not build great cities of the order of Chanchan, but their structures are handsome and reveal considerable knowledge of architectural principles. They attained esthetic harmony by studying the strength and nature of their building materials.

Construction was principally with rectangular, mold-made adobes. These were developed from the odontiform adobes of the earlier periods. Rough stone was used for wall foundations. In large buildings, or in walls built along the sides of roads, semicircular, bread-shaped adobes were used. Roofs were made of straw, cane, matting, and totora, supported with algarroba beams. Algarroba timbers were also used as a framework for the great masses of adobe in the solid pyramids.

Dwellings were usually small and consisted of rooms connected by rectangular doors, some of which were arched at the top.[6] Houses frequently had patios and terraces, and some had small entrance rooms. Roofs were gabled, with an open space between the two slopes at the peak, so that the houses not only provided shelter against the rains but were also well ventilated.

Palaces were erected on outstanding sites or on the tops of pyramids. They were approached by broad stairways. Both exteriors and interiors of the palaces were decorated with symbolical figures executed as frescoes and polychrome murals in relief. Adobes with decorative geometric stucco motifs were used in the building of palaces and temples.

Forts, located at strategic points in the Mochica territory, are solid structures. Often they are surrounded by massive high walls. The stairs, in contrast to those of the palaces, are narrow and steep, to prevent free access. The smooth walls are inclined, sacrificing artistic harmony to obtain strategic efficiency.

Temples were built upon the great solid pyramids and were decorated with complicated polychrome friezes of a religious character.

The principle of the column was known and frequently employed. On the Tambo Real Hacienda (pl. 72, *bottom*), in the Santa Valley, a monumental column 26 feet (8 m.) high stands on the center of a great pyramid.

The Mochicas knew and controlled the techniques of clay covering, plastering, and stuccoing for wall finish.

ROADS

Sections of roads are still in existence on the pampa of Chicama and in the valley of Santa. These roads were 9.80 m. (about 33 ft.) wide and ran the length of the territory, even through the most precipitous regions. Minor branches extended back from the main roads. Small rectangular platforms at intervals along the roads are presumably foundations for buildings which housed messengers.

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[6] Special attention should be called to the arch form mentioned above. There are examples of it in Mochica temple and tomb construction. Although known at this time, the arch was rarely used.

The road width of 9.80 m. (about 33 ft.) should be noted. A pyramid of this period is 98 m. (about 330 ft.) square at the base. This consistent factor, discovered in many other measurements, suggests that the Mochica unit of measure corresponded to 98 cm. (about 3.3 ft.).

DRESS AND ORNAMENTS

Clothing and jewelry of men were far more elaborate than that of women. Women, as a rule, wore only a large shirt, or camisa, and, rarely, simple ear pendants.

Men wore a breechclout, an underskirt, a sleeveless undershirt, a decorated overskirt hanging nearly to the knees, and a very showy, short-sleeved outer shirt that came down a little above the fringe of the underskirt. Both inner and outer clothing were tied around the waist with a belt decorated with artistic motifs. The Mochicas went barefoot but painted their feet and lower legs to resemble boots. Headdresses are sumptuous, but varied. Some are relatively simple, being a circular band or turban. Others are more complicated and are harmoniously combined in three parts: the cap with neck covering; the chin strap; and the turban proper, that surrounds the head like a crown and is adjusted over the other two parts. The turban was made of the finest cloth, of various colors and decorated with figures, or of treated feline or monkey skins. Stuffed birds, and pieces of gold, silver, or copper wrought in the shape of animals, ceremonial knives, and disks adorned the headdress. The final result as seen on dignitaries such as war leaders, rulers, or priests was very impressive.

These turbans were distinctive of rank, office, or profession, and serve to identify the interpreters of messages, the messengers, fishermen, agriculturists, priests, governors, and military chiefs.

As jewelry they wore great ear ornaments of gold, silver, copper, or of bone or wood with inlays of turquoise, mother-of-pearl, and lapis lazuli. The ear ornaments are simple circular and tubular forms, tubes with ridges or rosettes at the end, and varieties of pendants. Discoidal and other varied forms of nose ornaments were worn by nobles through a perforation in the nasal septum. Necklaces are of geometrically shaped beads, series of little idols, fish, stylized felines, fruits, and seeds. They were made of semiprecious stones (turquoise, lapis lazuli), quartz, rock crystal, gold, silver, copper, bone, shell, wood, and pottery. The central pieces of the necklaces were large beads representing human or mythological beings. The Mochicas also wore finger rings and covered their fingernails with thin sheets of gold.

Although most of the actual textiles have decayed, it is known that the Mochicas knew and used llama or vicuña wool and brown cotton. Zoological, botanical, and geometric motifs were used in the decoration of fabrics; in addition, they attached gold and silver disks to their garments. Feathers were also used to adorn clothing and turbans.

They painted the face and body with geometric figures, and they made incisions in the skin of the lips and cheeks to represent foxes, iguanas, felines, serpents, birds, and simple linear arrangements. No evidence of tattooing has been found.

TRANSPORTATION

The llama, the only domesticated beast of burden, carried cargo in bags, saddle-bags, and large baskets. There is also ceramic representation of llamas carrying mutilated persons.

Ocean travel along the coast was in the great balsas and in the smaller "caballitos" of totora. These craft were propelled with long paddles of wood or planed-off sections of Guayaquil cane.

MANUFACTURES

Ceramics.—The Mochica potter carefully selected his clays to obtain a uniform paste. First, the potter modeled a thick-walled clay model (pl. 71, *a*), which was fired. Over this he made the molds, which were cut vertically into two parts, following the groove down the sides of the model. From these negative casts (pl. 71, *b*, *c*) were obtained two positives, which were joined to form the vessel. The spout, handle, and base were made separately and added to the main body of the vessel. The junctures were obliterated; and the completed vessel was polished, painted, and exposed in the open air to dry before firing. Pottery was fired in open ovens, producing complete oxidization.

For paints, they used colored clay mixed with silicious materials that when fired produced a brilliant surface. Polishing was done with spatulas of bone. In special cases they inlaid the pots with turquoise, slate, and bits of gold and silver.

Textiles.—The Mochicas prepared thread by hand on a spindle having a whorl. Textiles were woven on hand looms. The few existing specimens of cloth and the pottery representations show the great variety of fabrics used for clothing and their rich decoration. Both open-mesh and close-weft weaving was employed. The thinner cloth served as underclothing and the more tightly woven for the outer garments. The textile industry was in charge of the women.

Preparation of skins.—Hides were prepared both depilated and with the hair. Judging from the appearance of the treated skins, they used lime and alum to treat and bleach them, obtaining a smooth, consistent, and flexible finish. Complete small animals and birds were stuffed for turban ornaments.

Work in gourds.—The gourd, an important article for domestic use, was decorated with incisions and inlays.

Metals.—The Mochicas obtained gold, silver, copper, and lead (pl. 71, *e*, *g*, *h*). The quantities of these metals which are found suggest that they not only got native metals but may have known techniques of extraction of ores. Pure lead, perhaps from silver-lead ore, has been found in tombs.[7] They alloyed gold with silver and with copper. They also gilded silver and copper with a gold amalgam that was put on by the means of fire. A sheet of copper is gilded with a very fine layer of gold hammered over it. In soldering, they used alloys of silver and gold to solder silver, and alloys of copper and gold to solder gold.

Sheets of gold as fine and delicate as note paper have been found in Mochica graves. Cascabels were made on stone molds, and metals were polished with stone burnishers.

GOVERNMENT

The remains of urban constructions, the expansion of agriculture through the great irrigation works, the outstanding architectural monuments, and the network of roads throughout the Mochica country attest to a life organized by mature governmental methods. In the high degree of artistic and technical attainments, it is suggested that governmental influence was directed toward great material achievements and the diffusion of cultural knowledge.

The Grand Señor, or Supreme Ruler (Cie. quich),[8] considered of divine origin, was dominant throughout the Mochica territory. His visage is encountered on funerary ceramics in archeological sites throughout the Mochica valleys. Sometimes these vessels represent him in full youth; at other times he appears in the sober majesty of the adult ruler. The Cacique (Alaec) was the regional governor, and his effigy is encountered only within the valley or sector of his particular administration. The Grand Señor, Cacique, was the military chief as well as civil ruler. Representations of this man with great feline teeth indicated his divine origin and religious functions.

Commoners approached the rulers with attitudes of great reverence, their hands placed together and head inclined toward the ground. When invited to a banquet by one of the chiefs, the guest always sat on a lower level while the host ate upon a throne covered by a sun shelter. Women never appeared at such social functions.

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[7] The presence of cinnabar (mercuric ore) in Mochica graves shows that this mineral was known. The author considers it not unlikely that the Mochica controlled techniques by which they freed mercury from the cinnabar and used this metal in the extraction of gold ore.—Author. See Root's discussion of metallurgy in prehistoric Perú, volume 5, Handbook of South American Indians, in connection with this.—Editor.

[8] This name and that of the divinities, mentioned subsequently, are taken from a vocabulary of the historic Mochica collected by Father Carrera

The rulers presided at festivals, hunted and fished as a diversion, and were conducted on magnificent litters, attended by a great retinue, to different parts of their realm. During such visits or journeys they maintained contact with all parts of their domain by means of messengers.

The rulers were severe and unmerciful in the administration of justice. Delinquents were punished with mutilation: cutting off the upper and lower lips, the nose, and the feet. In serious cases, they stripped the guilty of his clothing, skinned off his face, and stoned him to death. Afterward the body was abandoned to the birds of prey. Such sanctions were apparently carried out in public with great display.

WARFARE

The war chiefs were both protectively and gorgeously attired. The helmet or headdress was amply quilted in order to deaden the blows of the mace. The great ear ornaments were probably not only a mark of rank but also a protection for the side of the head and face. Warriors wore a breechclout, skirt, shirt, and bracelets of metal that protected the wrists. The common warrior usually wore a semicircular or conical helmet of great thickness, and carried a mace that had a sharp metal point on the handle end. He also hurled darts with the estólica, or spear thrower (pl. 71, *g*). A semicircular knife was used in close combat. Blows of the mace were warded off with a small circular or quadrangular shield fastened to the wrist of the left arm.

Armies made use of scouts, who moved ahead of the vanguard of the troops. These soldiers are represented on the pottery as keeping watch from the peaks of hills. War trumpets were made of the *Strombus galeatus* or of pottery. Dogs were carried with a special harness into battle in order to distract the enemy in the clamor of the battle (fig. 20, *a*).

Prisoners were conducted naked from the field of battle (fig. 20, *b*), and were sacrificed to the gods by being thrown from the mountain tops (fig. 20, *c*). Their bodies were afterward quartered and taken home as trophies.

LIFE CYCLE

During childbirth the mother, in a sitting position, was sustained by a man with the midwife assisting. A mother carried her small baby on her back in a manta or in a small cradle made of wood or wild cane, in which the baby was held by a net which allowed it freedom of the legs. Children were given pottery toys representing animals, humans, and utensils. They were also amused with rattles and whistles. As children, they were schooled in a specific art or industry.

It is observed that there are very few ceramic representations of children; they appear only with their mothers or other adults. Tombs of children are rarely encountered. The children were buried with their toys some of which are excellent miniatures of regular pottery vessels.

In general the children ran naked, although some of them wore a very simple shirt.

Women had full care of the children and conducted other domestic work. They also helped the men in more arduous labors. The men engaged in construction work, irrigation, tilling the fields, working in the mines, and in the opening of roads. They fought wars, hunted,

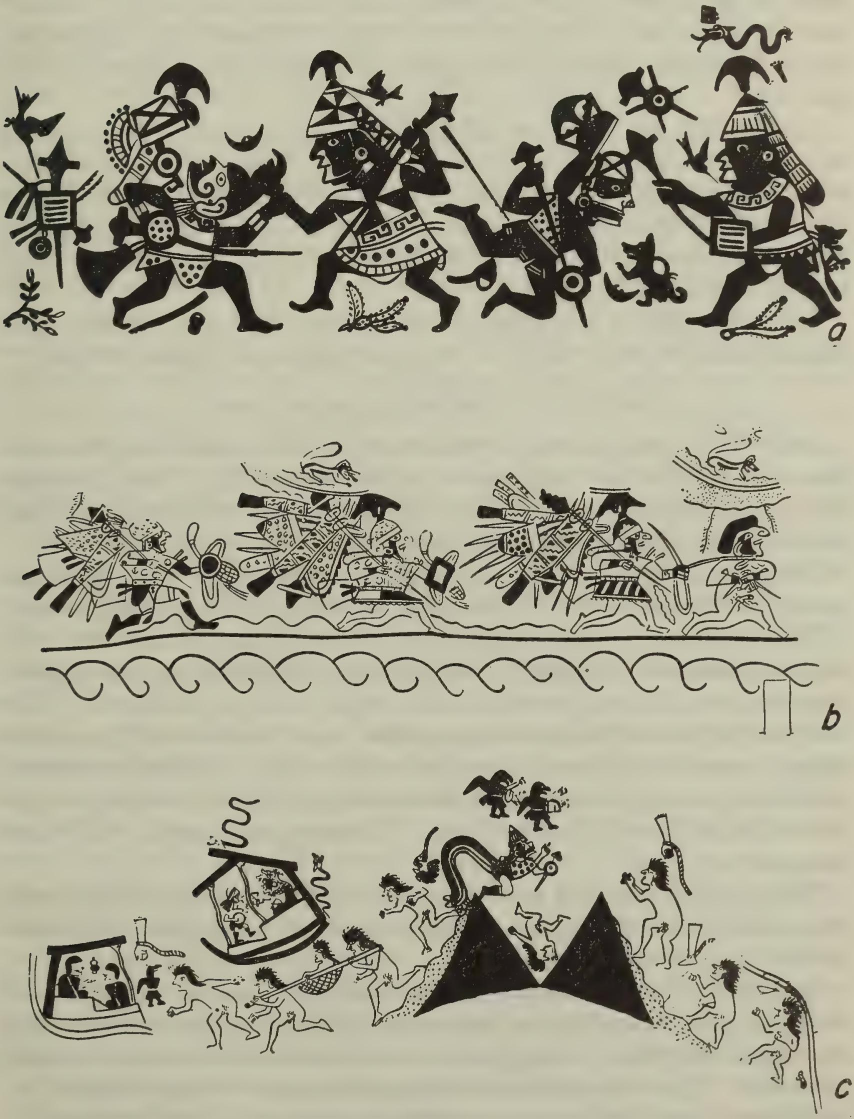

Figure 20.—Mochica life scenes from ceramic paintings. *a*, Battle scene, note dog; *b*, warriors with nude captives; *c*, prisoners thrown from cliffs. (Courtesy Rafael Larco Hoyle.)

and fished and were also concerned with the institutions of religion and government, and the system of ideographic writing and the transportation of their messages.

BURIAL

The dead were placed on their backs, at full length, and with one or both hands over the sacral region. Graves were elongated excavations sometimes lined with stones, cane, or adobes. Pottery, food, and other offerings were placed in niches and around the body. Pottery was the principal votive offering. Vessels representing dignitaries, foods, divinities, animals, life scenes, or utensils were placed around the body.

Apparently, the Mochicas believed that, when the flesh decayed, life was maintained in the skeleton or bones. Thus, their art depicts scenes of dancing skeletons; and in some tombs there have been found hollow canes that led from the mouth of the dead to the surface of the ground, presumably with the idea of offering the deceased food and drink by this device.

In the mouths of the dead, in accordance with their status, were placed sheets of gold, silver, or copper wrapped in a piece of cloth.

ESTHETIC AND RECREATIONAL ACTIVITIES

Art.—The Mochica artist was inspired by life around him, which he observed in detail and represented with great fidelity. Both in modeling and painting he captured a range of human emotions, including nobility and vice, religious sentiment and eroticism.

Modeling and relief work dominated ceramics (pl. 70). Red and cream colors were added to modeled pieces to vivify the sculpturing.

Their painted scenes lacked perspective, composition, and individual treatment of motifs. The pictures do, however, show great movement and give a complete idea of the scene represented. Zoomorphs, phytomorphs, anthropomorphs, and cursive and geometric figures were the common elements of their art. In their geometric motifs they employed many of the elements common today in the native art of the North Coast of Perú. Their portrait vessels (pl. 70) are outstanding.

Their artistic abilities were also expressed with great skill in bone, wood, and stone (pl. 71, *i*), and they have left behind true objects of jeweler's art, wrought in metals.

Festivals.—The Mochicas had festivals comparable to those held today by the Indians of the Coast and Highlands. They masqueraded as animals or strange beings, and executed warlike and religious dances to music. They also reproduced dramatic scenes. Some of their pottery shows scenic representations of battles of the god with demons.

Music.—For musical instruments, the Mochica had the flute, panpipes, drum, tambourine, straight and coiled trumpets, pututos (trumpets made of *Strombus galeatus*), and whistles. They had cascabels and jingles of silver, copper, or pottery, and maicheles (seeds that when rattled make a strident sound) for noise or music. These various instruments were used to accompany single or group singers. Some of the panpipes seem to indicate a seven-note scale and knowledge of semitones.

Narcotics.—Coca was reserved only for the great chiefs and persons of high rank. There are no representations of women taking coca. As today, coca was chewed in quids carried in the cheek. Lime, contained in a little gourd and mixed with coca by means of a long pointed needle, was used to release the stimulating alkaloid from the coca.

RELIGION

Mochica religion centers around feline symbolism, and it seems reasonable to believe that in this period we have, with a new elaboration and sophistication of animal worship, a continuation of the old feline deity of the North Coast. In Mochica art, the feline deity was anthropomorphized, and developed into a Supreme Divinity (Ai apaec), shown as a man with great fangs, a wrinkled face, and catlike whiskers spreading from the nose. The Supreme Divinity ruled the destinies of the world, but lived like people and could reveal himself both as a man and as a god. That he is a human embodiment of divinity is shown by vessels with four faces, on which human and feline faces are back to back and where the cat eyes are those of the Divinity.

Numerous vessels show this Divinity receiving sacrificed human beings who are thrown from a high cliff. The Divinity sits at the foot of the cliff receiving the blood of the victim as a precious offering. The Supreme Divinity is also shown as an agriculturist (pl. 70, *b*), shelling maize; as a fisherman (fig. 21, *a*), sailing the sea in a "caballito" (small balsa) (pl. 70, *g*); as a doctor; as a musician; and as a hunter. He is also pictured holding up the rainbow in the form of a two-headed serpent, and as a god of war whose intervention is necessary for victory. He furthers human propagation, as is shown by scenes in which, in the moment of coitus, two of his aides, anthropomorphized birds, prepare a concoction which is poured upon the genitals. The Supreme Divinity also takes the form of foods, animals, and even telluric and meteoric elements. As a personification of Good, he fights the demons (fig. 22, *b*, *c*), anthropomorphic vampires (pl. 70, *c*), crabs, fish (fig. 21, *b*), sea-demons, a strombus-shell dragon, a demon of the stones, a two-headed dragon with one head set in the tail, and a serpent with ears. In these fights he is always victorious.

There is also a court surrounding the Supreme Divinity. An anthropomorphic lizard is the servant; a dog is the faithful friend; a cormorant attends the Divinity while fishing, propelling the balsas; an anthropomorphic owl is a medicine man; an anthropomorphic falcon is the shield bearer; and an anthropomorphic marine eagle is the messenger who fetches the blood of the sacrificed. The anthropomorphic buzzards and falcons attend the Divinity when he returns wounded from his contests with the demons.

There is also a zoophytomorphic figure, which presides over agricultural scenes in which the Divinity takes part and which symbolizes the union of water with plants. It has a frog's body and a feline's nose and extremities. Yuca and lima beans grow from the body.

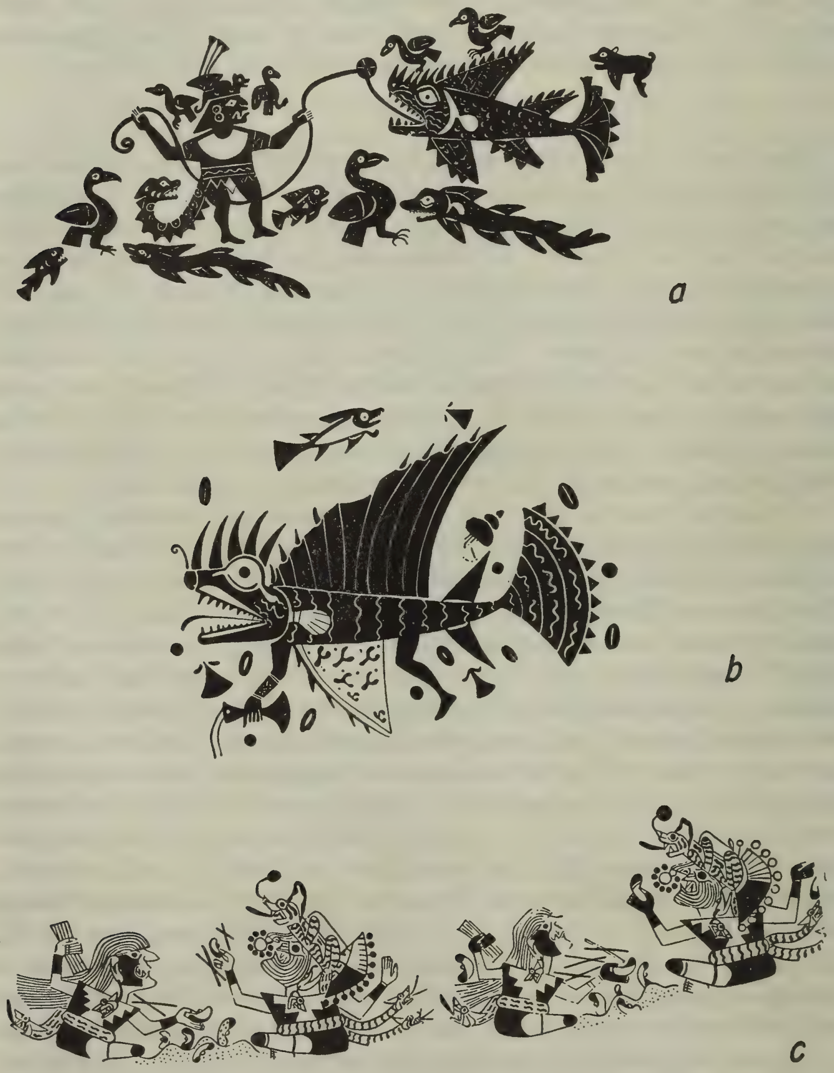

FIGURE 21.—Mochica scenes from ceramic paintings. *a*, Aiapaec fishing; *b*, anthropomorphic fish demon; *c*, Supreme Divinity reading bean ideographs. (Courtesy Rafael Larco Hoyle.)

The great political chiefs were also high priests, and judging from their clothing in religious scenes, probably formed a true caste.

The great number of pottery vessels depicting religious scenes or beings indicate that the life of the Mochica people was strongly interwoven with religious beliefs and feelings, based on nature worship.

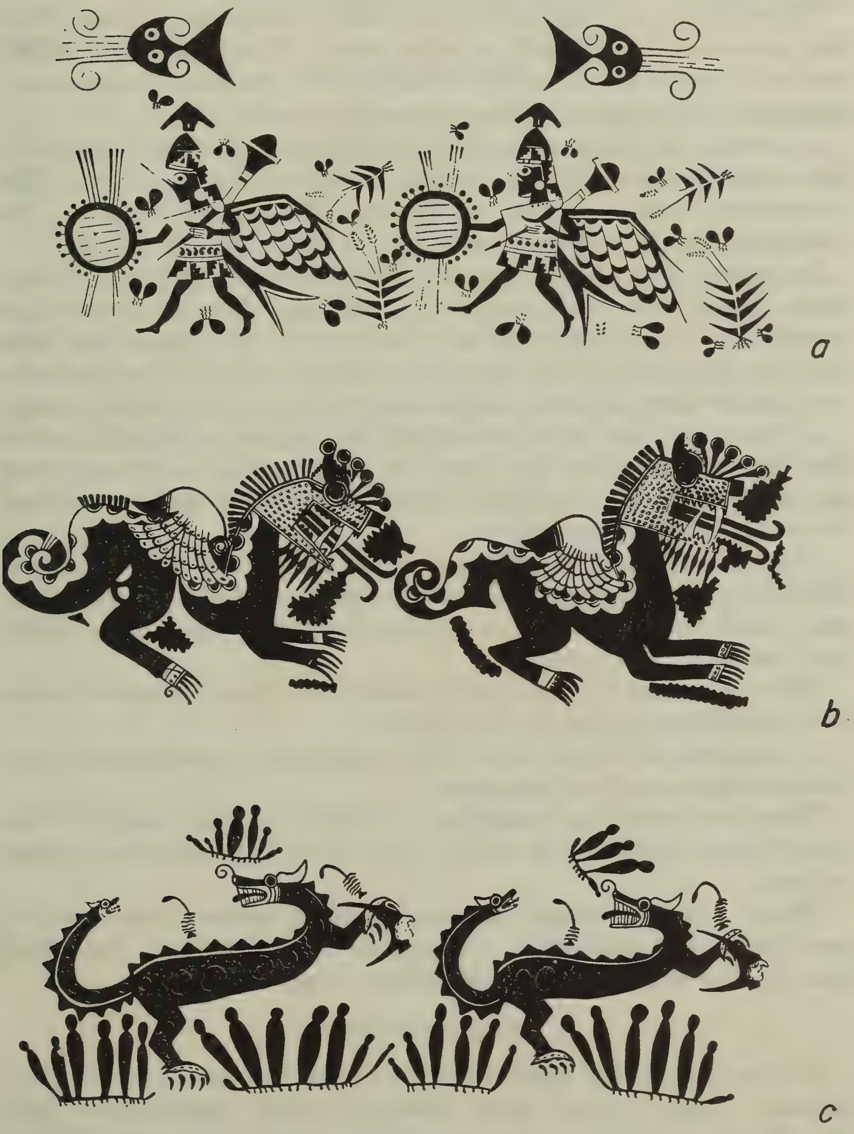

Figure 22.—Mochica fantasies from ceramic paintings. *a*, Hummingbird warrior, symbolizing bravery; *b*, *Strombus galeatus* demon; *c*, two-headed demon. (Courtesy Rafael Larco Hoyle.)

SHAMANISM, MEDICINE, AND SURGERY

The specialists in the curing of disease were of high lineage and were connected with the religious institutions. They are shown attired as chiefs, with feline attributes, Women also seem to have entered the medical or shamanistic profession, and are shown dressed in a long tunic that covers them from head to feet.

They believed in magic and witchcraft in the curing of illness, but they also were familiar with curative herbs. These include: habillas, used as a purgative; a variety of cactus that produced drunkenness; ashangos; and numerous other, unidentified herbs.

In curing, the sick man lay on his back, and the specialist sat beside him praying, chanting, and shaking gourd or pottery rattles. The curer also listened to and manipulated the patient's body. The shaman is always portrayed as carrying a small box of curatives.

In surgery these people knew amputation, cutting off the feet, legs, arms, hands, lips, nose, and male genitalia. For the removal of tumors (pl. 70, *i*) they used circular knives. In amputating arms and legs, they took great care and precision, cutting the bone at a level higher than the flesh incision in order to leave a healed stump.

A femur and ulna have been found which show a perfectly healed fracture, implying that they knew how to set bones. In pottery there are representations of simple orthopedic devices designed to aid those who had lost legs or feet.

There is evidence of the following infirmities: Idiocy; harelip; goitre; clubfoot; endematosis of the face, eyelids, and feet; uta; Pott's disease; luetic facial paralysis; generalized syphilis;[9] mixedema; blindness; sarcoma; and smallpox.

Other evidences from the bones themselves indicate osseous tumors and syphilitic softening of the cranium.

A fractured skull was found with cicatrices of healing; but there are no evidences of trephinization.

There are interesting examples, in pottery, of what may be "Siamese" twins of two types: those united posteriorly and those united in front.

There are many ceramic representations of isolated penises and of erect penises on individuals. All appear without prepuce, indicating that the Mochica, in general, practiced circumcision.

SEXUAL PERVERSIONS

In Mochica pottery there are many representations of sexual aberrations. These include: Male onanism; female masturbation with aid of an artificial instrument; fellatio; pederasty; cunni-linctus;

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[9] See volume 5, Handbook of South American Indians, for fuller discussion of prehistoric pathology in this region.—Editor.

lascivious acts between one man and two women; lascivious acts between two men and one woman; and unnatural positions in coitus.

Some of these ceramics are definitely made with humorous intent; others may carry moral implications, such as scenes which depict the physical and moral destruction of a sexual pervert. There seems to be no particular reason why the vessels were placed in graves; for instance, accompanying an infant of a few months, a vase was found representing fellatio.

IDEOGRAPHIC SYSTEM

The Mochicas had an ideographic system. Beans were indented with straight, curved, broken, and parallel lines, points, circles, crosses, etc. in kidney-shaped spaces. Many beans repeat the same design, as if conventional meaning were intended. These beans were carried in bags by messengers, like the *Inca* runners, traveling over roads. Anthropomorphic deer, falcons, hummingbirds, dragonflies, and centipedes symbolize the messengers. Anthropomorphic foxes, vizcachas, and felines symbolize the interpreters and scribes. Pictorial representations of these beans occur on pots and textiles, the bean being sometimes stylized, sometimes humanized (fig. 21, *c*).

This ideographic system spread throughout ancient Perú, reniform ideograms (inspired by the lima bean) being found on textiles and ceramics of the Paracas, Nazca, Tiahuanaco, and Lambayeque cultures.

The author has found numerous analogies between the Peruvian and Mayan ideographic systems, which he is now presenting in detail to the archeological profession.

CUZCO ARCHEOLOGY

By Luis E. Valcárcel

INTRODUCTION

Until 1933 the site of the *Inca* ruins of Cuzco (map 1, *No. 3*) was known by the descriptions of Clements R. Markham, George Squier, Charles Wiener, and E. W. Middendorf. Historians of the 16th and 17th centuries, such as Pedro Cieza de León, the *Inca* Garcilaso de la Vega, Guaman Poma de Ayala, Father Martín de Morúa, and many others had devoted many pages to the more or less exact and detailed description of the buildings, which in large part are still standing. They had speculated about the function of these buildings, the builders, and the manner of construction of such great architectural monuments as the fortress of Sacsahuaman.

During the period 1911–15, for the first time in Perú, a well-organized scientific expedition, under the auspices of the National Geographic Society of Washington and Yale University, directed by Prof. Hiram Bingham, conducted a series of thorough investigations in the valley of the Urubamba River, and discovered places of great interest, such as Machu Picchu. This marked the beginning of large-scale archeological explorations, which have since been carried on in different parts of Perú, particularly in the Coastal region.

In October 1933, the Museo Nacional of Lima was charged with doing some archeological work in the Department of Cuzco. The author of this article directed the work, which lasted from November 1933 to July 1934. In that short period very valuable results were obtained, for considerable evidence of the *Inca* culture was brought to light, at least doubling the volume of what had been known before. Excavations and clearings were made in many sections; and necessary restorations and repairs on a great part of the monuments were accomplished.[1]

Despite extensive results within the city of Cuzco itself, in the fortress of Sacsahuaman, and in all the valley, innumerable remains are still untouched. Also there are more ruins to be explored in the Cuzco-Apurimac area.[2]

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[1] At this time the Archeological Institute was founded in Cuzco. Under the auspices of the Institute, a museum was organized for the first time, in which the discovered materials were displayed. Unpublished material, including reports on Pisac, Piquillacta, and Cacha, is preserved in the museum..

[2] It should be noted that explorations made under the auspices of the Viking Fund (1940 and 1942) added to the knowledge of *Inca* monuments, towns, and roads in the general area in which Machu Picchu was discovered.

SOURCES

The details of what is here given only in general terms may be found in reports published in the Revista del Museo Nacional, Lima, as follows: Vol. 3, pp. 3-36, 181–91, and 209–34; vol. 4, pp. 1–24, 161–205, and 209–33; vol. 5, pp. 123–56 and i–xiv; vol. 6, pp. 67–80 and 201–31. These volumes correspond to the years 1934 to 1937, inclusive. Accounts of this work were also published in newspapers and magazines, including The Illustrated London News and La Prensa of Buenos Aires. Another popular account is contained in Nouvelles Dicouvertes Archeologique du Perú, published in connection with the International Exposition of Paris in 1937.

EXPLORATIONS

In very much summarized form, the following is a record of the results obtained in our archeological campaign of 1933–34.

The archeological sites explored were the following: (*a*) City of Cuzco; (*b*) Fortress of Sacsahuaman; (*c*) Baths of Tampumachay; (*d*) Fort of Pukara; (*e*) religious center of Ken-ko; (*f*) Temple of Lako; (*g*) Temple of Lanlacuyo; (*h*) Temple of Kusilluyoc; (*i*) Temple of Sapantiana; (*j*) the Suchuna site (Cuzco Valley); (*k*) solar observatory and annexes at Pisaj; (*l*) Fortress and tombs of Ollantaytambo; (*m*) Cave of Choke Akilla; (*n*) paths and constructions at Salapuncu (Urubamba Valley); (*o*) paths and perron of Tarawasi (Limatambo Valley); and (*p*) village of Pikillajta (Quispicanchi Valley). Furthermore, the vegetation that had covered the ruins of Machu Picchu since the work of Bingham was cleared away and an access road was constructed to the site. Similar work was done in part of Huayna Picchu.

SACSAHUAMAN AND VICINITY

The greatest amount of work, with relation to the volume of excavation and the extent of the area explored, was done at Sacsahuaman (pls. 73, 74). Aside from the numerous paths and terraces that were discovered on the hill, a site of 10 houses or habitations was uncovered, excavations being made to a depth of 4 to 4.5 m. (about 13 to 15 ft.). These constructions ranged in size of area covered from 11 to 121 $m.^2$ One of the habitations had 13 of the niches so frequent in *Inca* buildings. The principal habitation or room had three doors of access. All these constructions communicated with one another, and they were located on two different levels.

The three great fortified towers were found to which the historian, the *Inca* Garcilaso de la Vega, referred as existing in 1560, the year in which he left Cuzco for Spain. These towers, which had the names Muyu Marca, Salla Marca, and Paucar Marca, crowned the site of the Fortress of Sacsahuaman. Only the bases of these magnificient monuments were discovered. The first tower was in the form of a cylinder, its base contained in a rectangle. The notable thing about it was that, in the central part, there was a deposit for water, from which the water was distributed by canals. The base of the tower has three concentric circumferences with the following diameters: 9.35, 15, and 22.2 m. (about 30, 50, and 75 ft.). The base of the tower of Salla Marca is a rectangle 21.8 by 10.2 m. (about 65 by 33 ft.). There is evidence of several stories, and in the central part two platforms can still be seen. The tower of Paucar Marca has fallen into the worst ruin and only traces of it remain. Six other habitations, of a rustic style very inferior to the *Inca* style of the rest of the constructions, appeared in the eastern part of the site, and within them were several tons of *Inca* pottery fragments.

Behind the well-known great stone-block walls of the north side, on the second path, the passages or trenches, running parallel like a system of defenses, were restored. Small excavations made at the outer edge of the first great wall showed that the wall extended at least another 3 m. (10 ft.) below the present level of the plaza, an amount that should be added to the present maximum wall height of 6.5 m. (21 ft.). This seems to have been filled in, for in the front section were discovered a group of houses or rooms on an old plaza level.

Structural reinforcements were also made at Sacsahuaman to prevent landslides with subsequent destruction of terraces and walls. The work completed there reveals that the entire construction of the fortress belongs to the time and style of the *Inca*; none of it is pre-*Inca*. The Cyclopean walls are not different from the others that surround the site on its eastern, southern, and western sides. The stones in the latter are smaller, but they appear to be identical in form to those of the north wall. The blocks forming the north wall are much larger because the natural fortification was weaker in that section; on the other sides, the steep natural slopes assured defense.

The numerous constructions, some uncovered and others unexcavated, confirm the fact that Sacsahuaman was not a fort for the defense of the city of Cuzco but a fortified retreat for refuge in case of danger. In time of peace it was an important center of military supplies, the castle of the *Inca* Emperor, and a principal sanctuary. Sacsahuaman formed part of, and completed, a much greater site called Upper Cuzco or Janan Kosko. This site extends over the plains and steep inclines of the hills which dominated the city of Cuzco from the north and northeast. In the area fronting on the fortress, called Suchuna, many stone outcrops have been variously worked to form multiple geometric combinations which the common people recognize as altars or thrones. Along the cliffs are many nicely constructed walls of polished stone, which follow the natural curves of the cliff like a belt. The excavated constructions have revealed both religious and military monuments. Here, probably, began the curvilinear walls that seem so rare in the *Inca* architecture but which abound in this section of Upper Cuzco. Amphitheaters, like those of Suchuna and Kenko, are samples of this architectural style.

From early times, the sites of Tampumachay and Pucara, situated some 6 km. to the north of Sacsahuaman, have been known, respectively, as baths and a small fort. These sites were extensively and carefully excavated and cleared, and the buildings were restored in all their grace and splendor. They are very attractive because of the singular beauty of the landscape that surrounds them.

Toward the east is Kenko. It has been known from the time of the Conquest as an empty violated tomb which probably held the remains of the *Inca* Emperor Pachacuti, the ninth of the Cuzco dynasty. Exploration revealed one of the monuments at this site, which was artistically most impressive: the amphitheater of Kenko (pl. 75, *top*), with its area of 6.30 $m.^2$ (about 67 sq. ft.), its concave wall of 54.10 $m.^2$ (about 580 sq. ft.), the convex wall that follows it, 20.10 $m.^2$ (about 67 ft.) in length, and its 19 niches. These last average 1.20 m. (about 4 ft.) in width and 0.78 m. (about 2 ft., 8 in.) in depth. Only the lower parts of these ruins are preserved.

In front of this great amphitheater with the above-mentioned niches, on a platform of carved stone, is a natural rock, rising 5.90 m. (about 20 ft.) above the level of the ground. This probably was an object of worship, and its appearance at certain hours of the day is that of a gigantic puma. All the discoveries were made on the eastern side of the group of rocks called Kenko, under which was a sepulchral chamber. This stony mass has an area of approximately 3,500 $m.^2$ (about 37,500 sq. ft.), and presents innumerable carvings representing animals, geometric figures in echelon, little columns, and protuberances thought to be gnomons for astronomical observations.

Similar to Kenko are the archeological sites of Lako, Lanlakuyoc, and Kusilluyoj, but nothing was found there except the remains of walls against the cliff. In all of them, the stony masses have internal fissures which have been dug more deeply, introducing a complicated network of subterranean passages, labyrinths, or Chinkanas, which keep alive today in the popular imagination the legends about the fabulous treasures hidden away in secret compartments.

In one of these cliffs, called Titikaka, which emerges in the eastern part and in the lower levels of Kenko, three precious objects were found in the fissures: a little gold llama; an unusual gold ornament like a wristlet or wide bracelet; and the first example of a bowl or deep plate with a handle—a common form of Cuzco ceramics—delicately wrought of silver, with graceful openwork and inlays of shell and malachite. Another famous rock, that of Sapantiana, southeast of Sacsahuaman, was examined and excavations were made beside the rock. Its particular feature is a wall, in some places rising to a height of 6.5 m. (about 21 ft.), with entering and projecting angles.

In these excavations in the Valley of Cuzco, numerous objects were found while clearing the undergrowth, but no tombs were discovered. The majority of things found were fragments, although some small pieces were still intact. The only new pottery form discovered was a "candelabrum" bowl with a handle and a pedestal base. This specimen is grayish-ocher in color and is 0.21 cm. (about 8 in.) tall. A small alabaster box was found, divided into cylindrical compartments, two containing vermilion, two cerulean blue, and two chrome-yellow paints, all colors used by *Inca* artists. Four of these compartments were hermetically sealed with bits of the same alabaster. This find is unique among artifacts of this class.

Other interesting finds at Sacsahuaman were: a necklace of 24 small silver tubes into which feathers could be inserted; a large silver belt 3.12 m. (about 10 ft.) long and weighing 180 gm. (6 oz.); a number of bright paints or colors which an analysis showed to be azurite, orpiment, cinnabar, realgar, and malachite mixed with hydroxide of iron; a piece of modeled pottery of Chimu style representing a monkey with two pacay fruits; another vessel in the Tiahuanaco style which was found together with a bone (ruki) knitting or weaving tool; two miniature shell sculptures of human feet; and a small anthropomorphic figure, also of shell, red on the front side and white on the back. The presence of the Chimu vase is not strange, since that style was contemporary with the *Inca;* but the Tiahuanaco specimen chronologically antedates the beginning of the *Inca* Empire by a long period. This object was, however, found in a surface layer along with *Inca* remains.

All the buildings and other objects uncovered at Sacsahuaman were in full view in the years before 1560, according to the detailed description made of them by the historian of Cuzco, the *Inca* Garcilaso de la Vega. This description was completely confirmed by the recent excavations. Other sources, such as the "Noticias Cronológicas del Cuzco," a manuscript of circa 1740, assert that the destruction of the fortress began in 1537 under the pretext of preventing the Indians from taking it over as a strategic point from which to threaten the city of Cuzco (which is what happened in the revolt of Manco II). Actually, the object of the Spaniards was to discover the treasures believed to be concealed within the fortress. In 1561, the Municipal Council of Cuzco issued a strong order prohibiting the removal of stones of the constructions, but already they had been used in great numbers by residents of the city and by the builders of churches, especially the cathedral.

The work carried on at Sacsahuaman definitely clarified the problem of the origin of the site. Beginning with Markham, several archeologists have maintained that the fortress, especially the structure called "megalithic," or that of the great stones, was mainly pre-*Inca*, only a small portion of it being constructed by the *Inca*. Such a hypothesis is clearly untenable, as Uhle recognized (1937, p. 93).

OTHER EXCAVATIONS

Ollantaytambo.—Excavations at Ollantaytambo (pl. 75, *bottom*) were next in importance to those at Sacsahuaman. Large sections which had previously been buried were brought to light: handsome constructions, walks, swimming pools, and canals. Various tombs were excavated and in them were discovered colored, lacquered, wooden vases (keros) with zoomorphic figures. Until then, keros had never been found underground but merely transmitted inter vivos. Some 400 pins (tupus) were found, the first known; they are almost identical with modern ones and are made of copper. Some beautiful rose-colored paving stones, perfectly polished, were also discovered, as well as some construction blocks of extraordinarily fine cut and polish.

Pisaj.—The work at Pisaj considerably widened the known area. Discoveries were made of a tunnel cut into the cliff and very high passages dug in the rock, as well as little towers and other peculiarities of style that do not appear at Cuzco.

Limatambo.—At Limatambo (pl. 76, *bottom*), where the site of Tarawasi is of very great artistic value, a monumental perron was revealed, the only one of such magnificence to be seen today.

Piquillacta.—In Piquillacta were found a pavement of plaster and lime blocks and walls whitewashed with plaster, a structural style very different from the typical *Inca*; nonetheless, all the objects found were of that style.

Salapuncu and Chokeakilla.—In Salapuncu walks, walls, canals, and terraces were cleared. At Chokeakilla a sanctuary in a cave was studied. This cave was ornamented on different levels with paintings in black geometric lines, an unusual style. In the nearby paths could be found the remains of ancient cultivation.

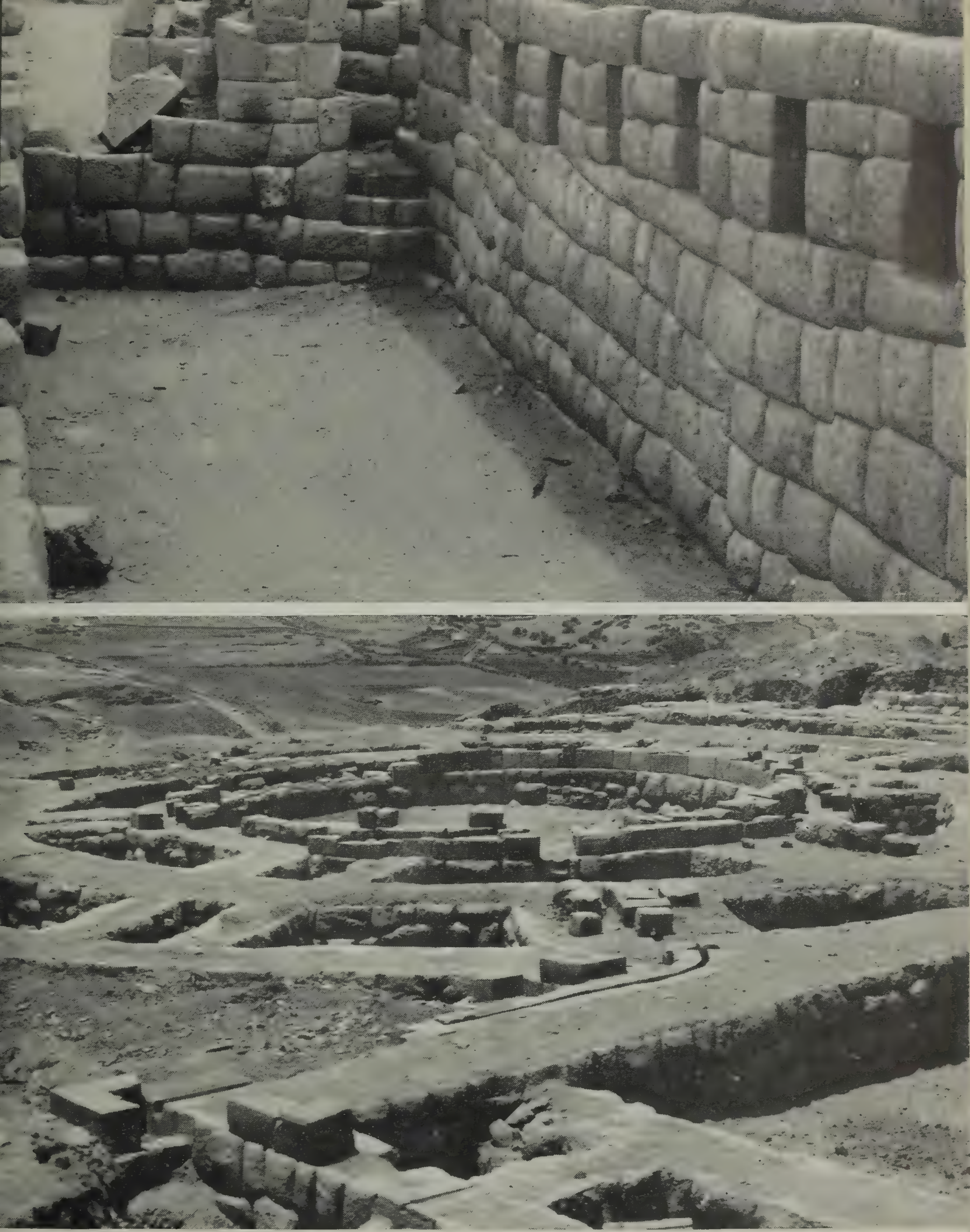

Plate 73.—**Architectural features at Sacsahuaman.** *Top:* A habitation. *Bottom:* Foundations of the Torreón of Muyumarca. (Courtesy Luis E. Valcárcel.)

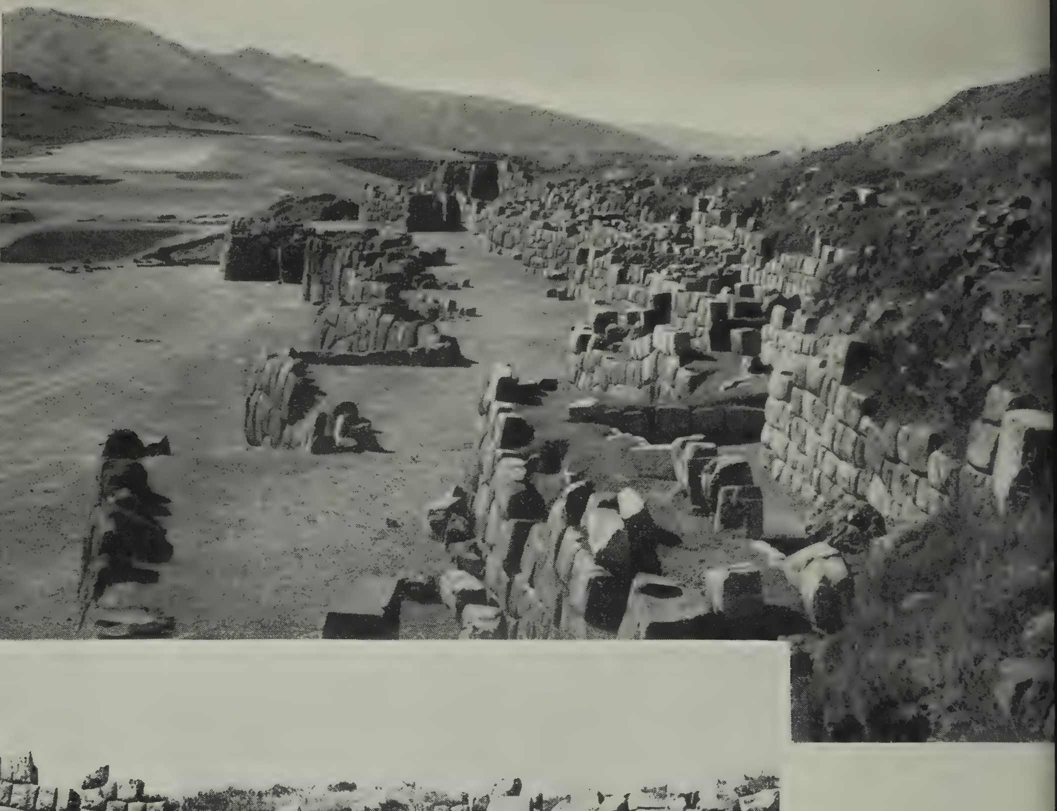

Plate 74.—**Views of Sacsahuaman.** *Top:* Looking along the fortifications. (Courtesy Truman Bailey.) *Bottom:* Section of wall. (Courtesy American Museum of Natural History.)

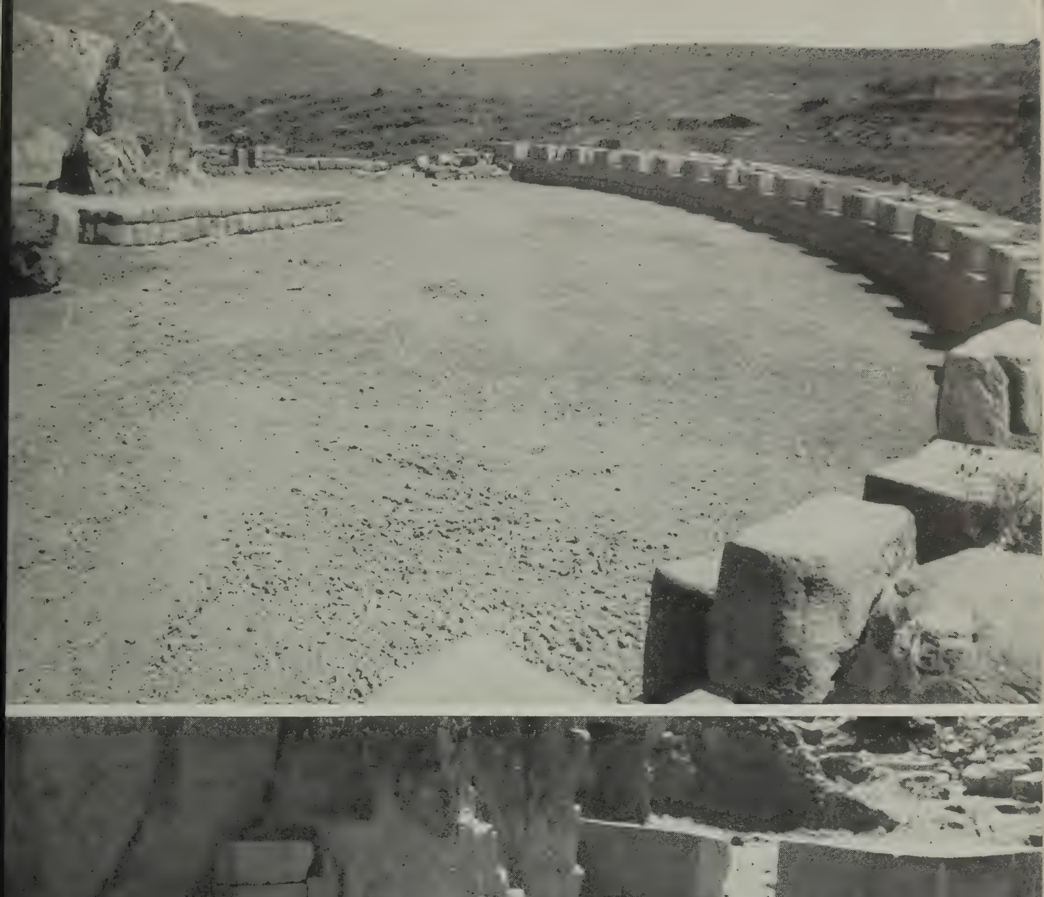

PLATE 75.—**Architectural features at Kenco and Ollantaytambo.** *Top:* The amphitheater of Kenco discovered in 1934. *Bottom:* Dressed stones for a construction at Ollantaytambo. (Courtesy Luis E. Valcárcel.)

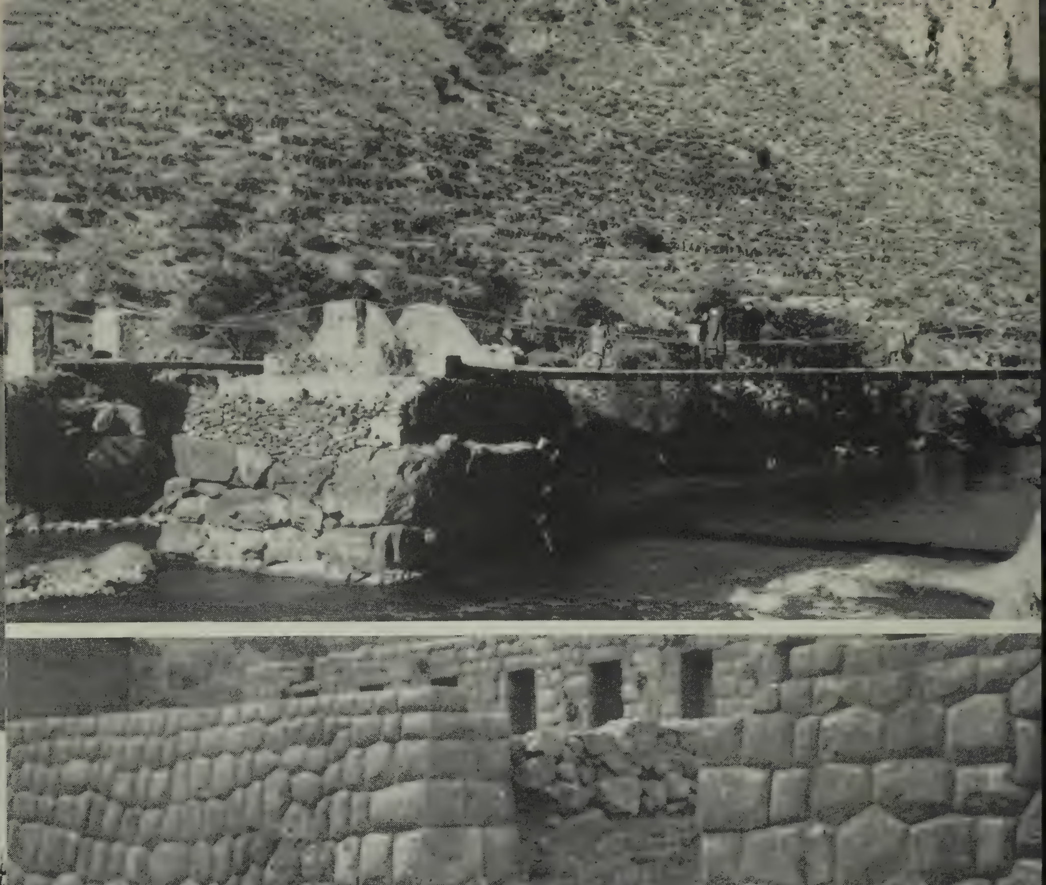

PLATE 76.—**Ollantaytambo and Limatambo.** *Top:* Bridge over the Urubamba River just below Ollantaytambo. (Courtesy Truman Bailey.) *Bottom:* The stair steps of Tarawasi, Limatambo.—(Courtesy Luis E. Valcárcel.)

INCA CULTURE AT THE TIME OF THE SPANISH CONQUEST

By John Howland Rowe

INTRODUCTION

This section of the Handbook deals with the culture of the Andean region between Ecuador and the northern border of *Aymara* territory as it was observed by the Spanish conquerors in the 16th century and recorded in surviving documents. This area includes the whole of the desert Coast of Perú and the broken valleys of the Peruvian Highlands, a region which was the home of many different tribes, nations, languages, and cultures before it was superficially unified by its incorporation into the *Inca*[1] Empire (map 1, *No. 4*). It would be obviously impossible to include a complete account of each tribe in the Handbook, even if the necessary information existed. With minor exceptions, however, the whole of the literature now available which deals with this part of the Andean area refers to *Inca* culture in the region around Cuzco, so that it is only for the *Inca* that a complete cultural description is possible. The account that follows, therefore, is specifically an ethnographical description of the *Inca* culture, although differences in other parts of the area are indicated when the limitations of the source material permit.

The area covered by this section lies only a small distance from the Equator, but cold ocean currents make the dry coast almost temperate, and most of the mountain valleys are at an elevation of 7,000 to 12,000 feet (2,000 to 4,000 m.) above sea level, where the elevation counteracts the effects of the low latitude. Throughout the area, the climate varies more with elevation than with distance from the Equator, so that hot low valleys are only a short journey from cold plateau country where little can be grown except potatoes. As a result, it costs the inhabitants relatively little effort to vary their diet and dress with the products of another climate, and this incentive is as much of an encouragement to local travel as the broken mountain and desert barriers are a hindrance. Rainfall is light in the mountains and almost absent on the Coast, so that irrigation is generally necessary for successful cultivation. Before the introduction of the eucalyptus in the 19th century, trees were very scarce, and usually so gnarled and stunted as to be of little use except for firewood. Salt, copper, gold, and silver are common, and pottery clay and building stone are abundant.

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[1] *Inca* is used to denote the *Quechua*-speaking peoples around Cuzco, and, more generally, the Empire which they ruled. It seems better to avoid the use of "*Inca*" as a title for the Emperor or to refer specifically to the royal family, although such a practice is common and historically correct.

POPULATION

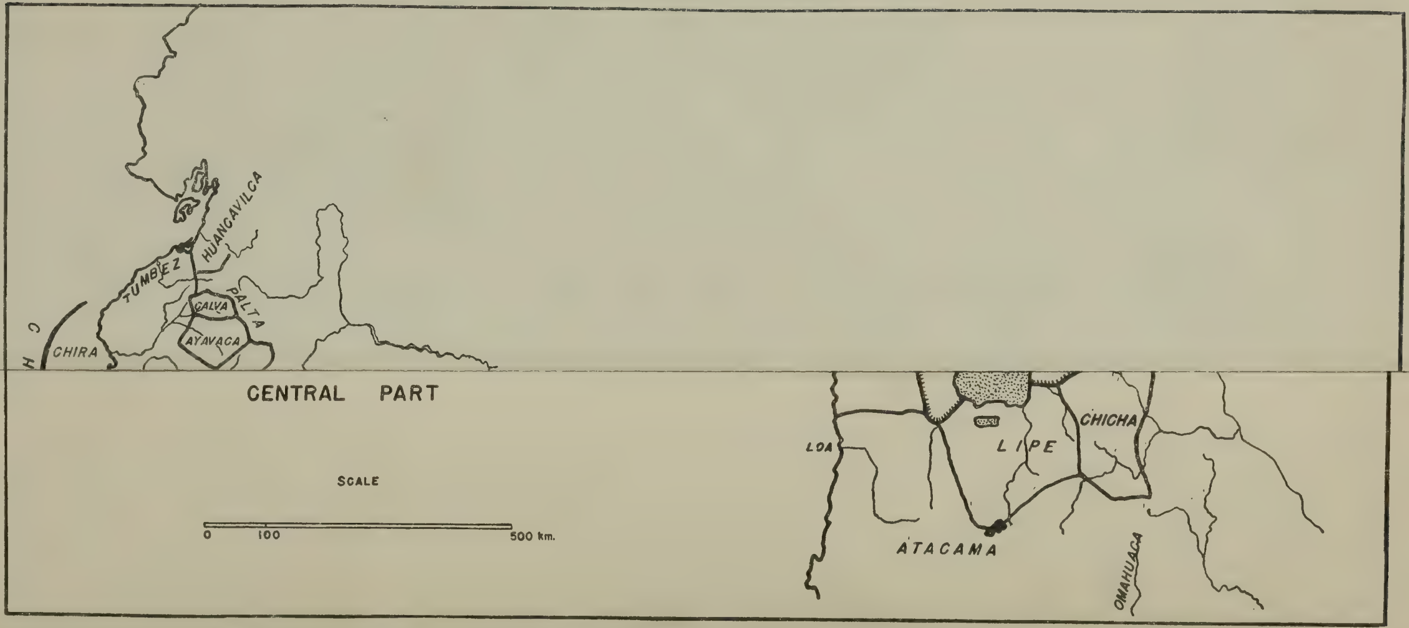
The modern population of the whole Andean area, from the north of Ecuador to northern Argentina and Chile, is about 14 million. It is not dense in relation to the total area covered, but extremely so if only the sections useful for agriculture and grazing are considered, for much of it is too rocky, too steep, or too dry to be of much use to its inhabitants. The ancient population was almost certainly smaller than the modern, for there has been considerable urban growth and local industrialization in recent years, but it is very difficult to make an accurate estimate of the difference. The *Inca* kept accurate population statistics (Cieza, 1880, 2, ch. 19), but the figures were nearly all lost at the time of the Spanish Conquest, and the first Spanish figures available are derived from the census taken by Viceroy Toledo about 1571, when a total of 311,257 taxpayers, or 1½ million persons, was registered (Morales, 1866). The total of Toledo's census is, however, of little use in an attempt to estimate *Inca* population at about 1525, for in the 40 intervening years the Indian population was nearly destroyed by civil wars, epidemics, lawlessness, extortion, and cultural shock. These factors affected the provinces differently, and the amount of population loss varied correspondingly. The following sample figures will illustrate the variation:

TABLE 1.—*Estimated* Inca *population loss in the provinces of the Andean area from 1525 to 1571*[1]

Province	1525	1571	Ratio
Rimac	150,000	9,000	16:1
Chincha	50,000	2,070	25:1
Yauyos	50,000	35,000	3:2
Huancas	135,000	36,000	3:1
Soras	20,000	15,159	4:3
Total	405,000	97,229	4:1

[1] Rimac: Cobo, 1890–95, 1: 7; Morales, 1866, p. 42. Chincha: Castro and Ortega Morejón, 1936, p. 240; Morales, 1866, p. 43. Yauyos: RGI, 1881–97, 1:62. Huancas: RGI, 1881–97, 1:81–82; Morales, 1866. Soras: RGI, 1881–97, 1:170; Morales, 1866, p. 44. The figures for Rimac, Chincha, and Yauyos are based on the stated number of honokoraka, or chiefs of 10,000 taxpayers, maintained in each province by the *Inca* government. Totals of taxpayers are converted into total population at the rate of 1:5, by analogy with the 1571 figures for Soras and Rucanas (RGI, 1881–97, 1:170, 181, 199). Figures in round numbers and ratios are approximate. (See also Señores, 1904, p. 204.)

This table includes all the reliable estimates of *Inca* population that have been preserved for our area, and, as the tribes listed were selected by the historical accident of this preservation, the group can be fairly called a random sample. It is also a representative group, for it includes two of the provinces known to have suffered worst between


C
H
CHIRA
TUMBEZ
HUANCAVILCA
PALTA
CALVA
AYAVACA
CENTRAL PART
SCALE
0
100
500 km.
LOA
LIPE
CHICHA
ATACAMA
OMAHUACA

Map 3.—Tribes and provinces of the *Inca* Empire (Perú-Bolivia), circa 1530. (Drawn from data compiled on the *Quechua* by John H. Rowe and on the *Aymara* by Harry Tschopik, Jr.)

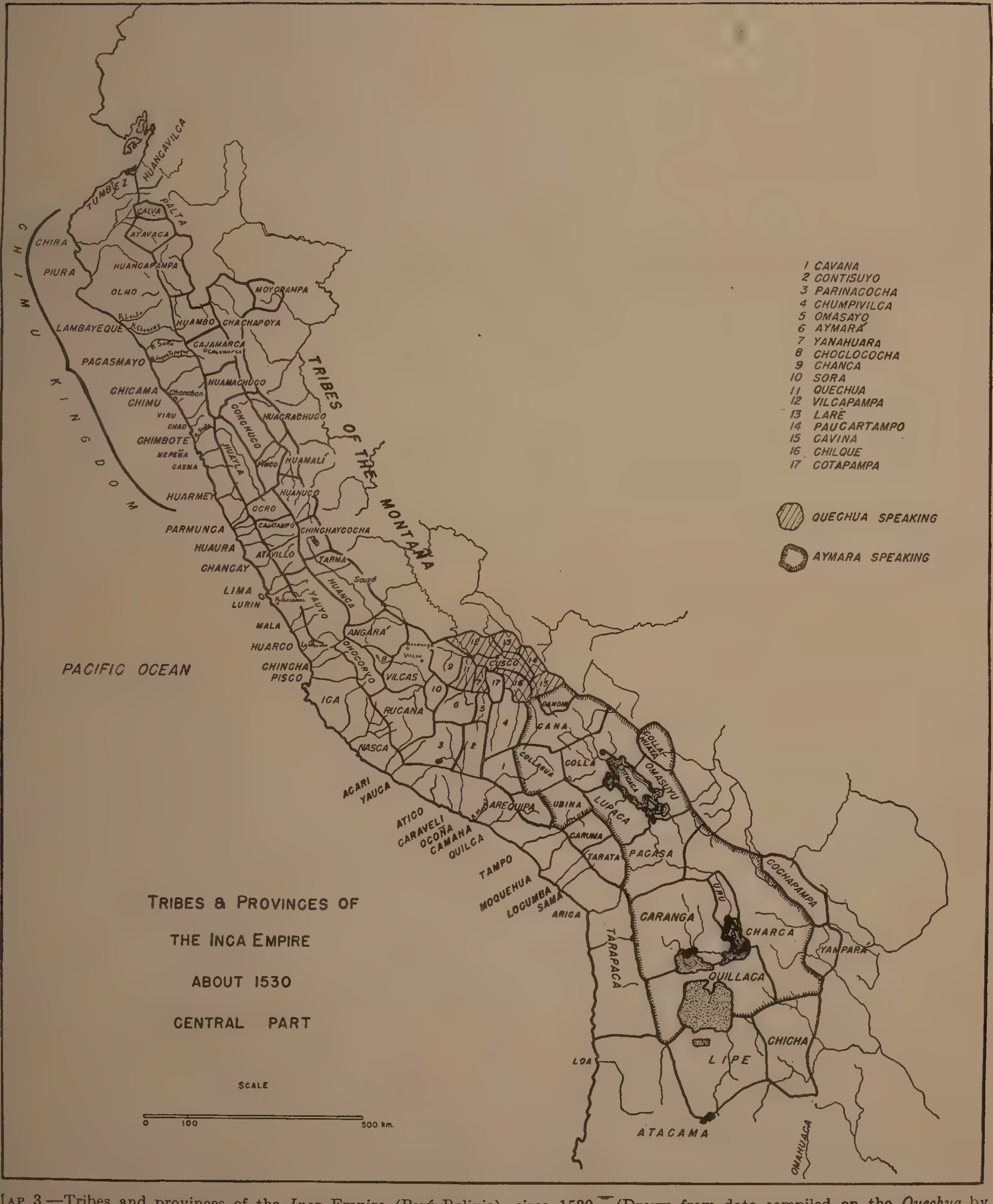
1525 and 1571 (Chincha and Rimac) and two that escaped relatively unharmed (Yauyos and Soras). Consequently, it is not unreasonable to apply the ratio of totals (4 :1) to the population reported in 1571, and estimate the total population of the Andean area in 1525 at about 6 million.

TRIBES AND PROVINCES

At the time of the *Inca* conquest, the whole Andean area was divided into an almost unbelievable number of small political units, for many of which we do not have even the names. The linguistic diversity was nearly as bad, and the *Inca* found it necessary to impose their own language, usually called *Quechua*, as a common medium for government and inter-communication in the whole extent of their dominions. The Spaniards found *Quechua* such a convenient tool in their dealings with the natives that they never bothered to learn most of the local languages, dozens of which have perished without leaving a trace. This political and linguistic situation makes the composition of any list of tribes or their representation on a map extremely difficult. The *Inca* simplified the map of the Andean area rather arbitrarily, however, by dividing their Empire into provinces based on the old tribal and linguistic units, but with small tribes combined or added to neighboring large ones. Although our knowledge of the *Inca* provincial divisions is also incomplete, the provinces are still the most convenient units by which to describe the area, and the named areas on the accompanying map (map 3) correspond as nearly as possible to the *Inca* provinces.

All additional information available on synonymy, small groups included with the provincial boundaries, and bibliographical references of some ethnological or historical importance is presented in the following list of tribes. The list deals first with the Highlands, from north to south, and then with the Coast valleys in the same order. The divisions of the Coast used in the list and on the map are individual valleys. In most known cases, each valley was administered by the *Inca* as a separate province, but some of the small ones may have been combined.

In spelling, 16th-century Spanish followed no fixed rules, and even the simple conventions usually preferred by the printers of the day were seldom followed by scribes in America. Between this and the shortcomings of the 16th-century Spanish soldier as a phonetician, it is often extremely difficult to recognize native names of known pronunciation, and impossible to restore exactly those of doubtful pronunciation. The Spaniards frequently wrote voiced stops for unvoiced stops: *b* for *p* and *g* for *k*, as in "bamba" (from *Quechua* PAMPA) and *Ynga* (from *Quechua* "IÑKA"). *Y* was usually written instead of *i* at the beginning of a word. *X* and *ç*, both sibilant sounds which Spanish has since lost, were written for *Quechua* "s";


TRIBES & PROVINCES OF
THE INCA EMPIRE
ABOUT 1530
CENTRAL PART
SCALE
0
100
500 km.
1 CAVANA
2 CONTISUYO
3 PARINACOCHA
4 CHUMPIVILCA
5 OMASAYO
6 AYMARÁ
7 YANAHUARA
8 CHOCLOCOCHA
9 CHANCA
10 SORA
11 QUECHUA
12 VILCAPAMPA
13 LARE
14 PAUCARTAMPO
15 CAVINA
16 CHILQUE
17 COTAPAMPA
QUECHUA SPEAKING
AYMARA SPEAKING
CHIMU KINGDOM
TRIBES OF THE MONTAÑA
PACIFIC OCEAN
HUANCAVILCA
TUMBEZ
PALTA
CALVA
AYAVACA
CHIRA
PIURA
HUANCAPAMPA
OLMO
MOYOPAMPA
HUAMBO
CHACHAPOYA
LAMBAYEQUE
CAJAMARCA
PACASMAYO
HUAMACHUCO
CHICAMA
CHIMU
VIRU
CHAO
CHIMBOTE
NEPEÑA
CASMA
CONCHUCO
HUACRACHUCO
HUAYLA
PINCO
HUAMALI
HUANUCO
HUARMEY
OCRO
CHINCHAYCOCHA
PARMUNCA
HUAURA
CAJATAMPO
ATAVILLO
TARMA
CHANCAY
HUANCA
LIMA
LURIN
YAUYO
MALA
ANGARÁ
HUARCO
CHOCORVO
VILCAS
CHINCHA
PISCO
CUSCO
ICA
RUCANA
NASCA
CANCHI
CANA
COLLAGUA
COLLA
COLLA HUAYA
OMASUYU
TITICACA
LUPACA
UBINA
AREQUIPA
ACARI
YAUCA
ATICO
CARAVELI
OCOÑA
CAMANA
QUILCA
CARUMA
TARATA
PACASA
TAMPO
MOQUEHUA
LOCUMBA
SAMA
ARICA
COCHAPAMPA
URU
CARANGA
CHARCA
YAMPARA
TARAPACA
QUILLACA
CHICHA
LIPE
LOA
ATACAMA
OMAHUACA

Map 3.—Tribes and provinces of the *Inca* Empire (Perú-Bolivia), circa 1530. (Drawn from data compiled on the *Quechua* by John H. Rowe and on the *Aymara* by Harry Tschopik, Jr.)

595682—46 (Face p. 185)

the first has become Spanish *j*, the second, Spanish *z* in modern spellings. *L* was often written for *Quechua* "r"; *gu* and *hu* before vowels usually stand for *Quechua* "w." Hence forms like Caxamalca and Cajamarca from Q'ASA-MARKA, Guamanga from WAMAÑQA. The worst confusion is in the spelling of Spanish *u* and *hu* and *Quechua* "o" and "w." *B* and *v* were used almost interchangeably for *u*; so, in Spanish words, the forms "vuo (hubo!)" and "cibdad (ciudad)" are not uncommon. *Quechua* WIL'KA-PAMPA becomes Vilcabamba, or even Bilcabamba. Initial *h* is added or omitted capriciously ("horden" for "orden").

Quechua names are written phonemically in large and small capital letters in the following list and through the text where it is possible to reconstruct the pronunciation from the Hispanicized form used in the chronicles. Where the pronunciation has not been determined, the commonest Hispanicized form has been used and marked with an asterisk. The phonemic alphabet used for *Quechua* is modified slightly from current phonetic usage to avoid the use of symbols which cannot be printed in the Andean countries (Rowe and Escobar, 1943). To approximate the 16th-century pronunciation, read all letters as in English, with the following exceptions: *i* is a sound halfway between Spanish *i* and Spanish *e*; *o* is halfway between Spanish *o* and Spanish *u*. *C* is pronounced like *ch* in "church"; *l'* is pronounced with the whole blade of the tongue touching the palate instead of just the tip; *ñ* represents the sound of *ng* in "sing"; *q* is back or velar *k*; *r* is like the Spanish *r* in "para." *Y* and *w* after consonants indicate palatalization and labialization, respectively; *h* indicates aspiration of the preceding consonant, and an apostrophe (except after *l*) indicates glottalization.

The forms of provincial names used on the map (map 3) and given first in the following list are the most common Spanish forms, except that I have written "pampa" instead of "bamba" and "tampo" instead of "tambo" and the singular form is used. Plural forms usually occur in the documents, being formed in Spanish with *-s* or *-es*. *Vilcas* is an exception in that the *s* is part of the native name and the word is singular as it stands.

Peruvian Highland divisions:

(*1*) *Calva* (*Calua*). Province and tribe. (Cieza, 1554, bk. 1, ch. 57.)

(*2.*) *Ayavaca* (*Ayabaca, Ayauaca;* probably from *Quechua* AYAWAK'A, "shrine of the corpse"). Province and tribe. (Cieza, 1554, bk. 1, ch. 57.)

(*3.*) *Huancapampa* (*Huancabamba, Guancabamba*; probably from *Quechua* WAÑKA-PAMPA, "valley of the field-guardian"). Its provincial capital was one of the most important *Inca* towns in northern Perú. The natives had their own language, but used *Quechua* also in 1550. They told Cieza that they had formerly eaten human flesh and fought continually among themselves (Cieza, 1554, bk. 1, ch. 57).

(*4*) *Huambo* (*Guambo;* probably from *Quechua* WAMPO, "boat"). The province is also called *Cutervos* (*Cuteruos, Cuterbos*), and it is not clear whether the two names are synonymous, or whether the province included two different tribes. (Calancha, 1638, bk. 2, ch. 8.)

(*5*) *Cajamarca* (*Caxamarca, Caxamalca, Cassamarca;* probably from *Quechua* Q'ASA-MARKA, "town in a ravine"). Its provincial capital was a very important town, with elaborate ceremonial buildings; near it were hot baths. Before the *Inca* conquest, it was the capital of a powerful state allied to the *Chimu* Kingdom. (Cieza, 1554, bk. 1 ch. 77; Sarmiento, 1906, chs. 38, 44.)

(*6*) *Chachapoya* (*Chacha*). Province and tribe. The province included also tribes called *Huanca* (*Guanca*), *Chillao*, and *Casca-yunga.* The *Chachapoya* were famous as vigorous warriors, and had unusually light skin. (Cieza, 1554, bk 1, ch. 78; Garcilaso, 1723, pt. 1, bk. 8, chs. 1–3; Calancha, 1638, bk. 2, ch. 8; RGI, 4: ii–xix.)

(*7*) *Moyopampa* (*Moyobamba, Muyupampa;* probably from *Quechua* MOYO-PAMPA, "round valley"). An *Inca* province in a low extension of the Andes. (Garcilaso, 1723, pt. 1, bk. 8, ch. 2.)

(*8*) *Huamachuco,* (*Guamachuco, Huamachucu*). *Inca* province and road junction. The Indians spoke the same language as the people of Cajamarca. (Cieza, 1554, bk. 1, ch. 81; Calancha, 1638, bk. 2, chs. 8, 32; Garcilaso, 1723, pt. 1, bk. 5, ch. 14.)

(*9*) *Huayla* (*Guayla, Huaylla;* probably from *Quechua* WAYLYA, "meadow"). The natives had a reputation for homosexuality. (Cieza, 1554, bk. 1, ch. 83; Garcilaso, 1723, pt. 1, bk 5, ch. 11.)

(*10*) *Conchuco* (*Conchucu*). A sacred grove at Tauca in this province is mentioned by Calancha (1638, bk. 2, ch. 32; Cieza, 1554, bk. 1, ch. 82).

(*11*) *Huacrachuco.* Garcilaso is the only chronicler who mentions this part of the east bank of the Marañón River, so far as I am aware (Garcilaso, pt. 1, bk. 8, ch. 1). Huacrachuco (or Huacrachucu) is his name for this region, and it survives as the name of a modern town. (See also Markham, 1871, p. 315, and Tello, 1942, p. 651.)

(*12*) *Pinco.* This tribe is mentioned by Cieza (1554, bk. 1, ch. 82) approximately in the location marked.

(*13*) *Huamalí* (*Guamalí*). The province is mentioned by Calancha (1638, bk. 2, ch. 32, and bk. 4, ch. 18). A modern Peruvian province still bears the same name.

(*14*) *Huánuco* (*Guánuco, Huánucu*). The *Inca* town and provincial capital of this name stood on the left bank of the Marañón River, not on the Huallaga River where the modern city stands. Its extensive ruins are still called Huánuco Viejo. (Cieza, 1554, bk. 1, ch. 80.)

(*15*) *Ocro.* The *Ocro* and *Lampa* inhabited this area. (Calancha, 1638 bk. 2, ch. 8.)

(*16*) *Cajatampo* (*Caxatambo;* probably from *Quechua* Q'ASATAMPO, "lodge in the ravine"). This province may have included the *Ocro* and *Lampa* as well as the area indicated on the map. (Calancha, 1638, bk. 2, ch. 3.)

(*17*) *Chinchaycocha* (probably from *Quechua* CINCAY-QOCA, "lynx lake"). A province which included the Lake of Junín. It is also called *Bombon, Pumpu,* and *Junín.* It was famous llama-breeding country, with a warlike population which stoutly defended its fortified islands in the lake against the *Inca* (Cieza, 1554, bk. 1, ch. 83). Huayna Capac had balsas brought from Tumbes to use in the lake. (Estete, 1918, p. 93.)

(*18*) *Tarma* (*Tarama*). *Inca* province. (Cieza, 1554, bk. 1, ch. 84.)

(*19*) *Atavillo.* (*Atauillo, Atabillo*). Tribe and province in the modern Province of Canta, Department of Lima. Francisco Pizarro is sometimes called "Marqués de los Atavillos," although the title was never formally conferred on him. The *Atavillo* had their own language. (RGI, 1881–97, 1: 61.)

(*20*) *Yauyo*. The *Inca* province of Yauyos was divided into upper and lower moieties, and had about 10,000 taxpayers. The population included *Yauyo, Manco, Larao,* and *Huaro* (*Guaro*) of Huarochiri (Guarochiri Guarocheri), with a few colonists from *Chocorvo*. At least one non-*Quechua* language was spoken in it, and it included the territory where *Cauki*, a language related to *Aymara*, is said to be still spoken. (See The *Aymara*, pp. 501-573.) Considerable information about the customs and religious beliefs of the *Yauyo* is given in RGI, 1881–97, 1: 61–78. (See also RGI, 1881–97, 1: 143; Avila, 1939; Arriaga, 1920; Romero, ed., 1919.)

(*21*) *Huanca* (*Guanca*; probably from *Quechua* WAÑKA, "field guardian"). The province was also called *Jauja* (*Xauxa, Sausa*) from the name of one of its sections and the provincial capital, HATOÑ SAWSA. It was divided into three sections (SAYA), upper and lower *Huanca* and *Jauja*, with a total population of about 25,000 taxpayers in *Inca* times. The population included *Huanca, Chongo*, and some colonists from *Yauyo*. Each section had its own language or dialect. They made small balsa rafts of four or five logs and, originally, built round houses. Several *Huanca* legends are given by Cieza. (RGI, 1881–97, 1: 79–95; Cieza, 1554, bk. 1, ch. 84: Romero, ed., 1923 a, 1923 b.)

(*22*) *Angará*. The *Angará* were a warlike people, and the *Inca* settled a large part of their province with colonists from Cajamarca, *Chanca, Huaro* from Huarochiri, and *Quehuar* from Cuzco. The *Angará* were divided into two sections called Astos and Chacas. (RGI, 1881–97, 1: 140–44, Cieza, 1554, bk. 1, ch. 85 [Acos and Parcos]; Sarmiento, 1906, ch. 44.)

(*23*) *Choclococha*. The independent existence of a province of this name is doubtful, but I can find no authority for joining it to any of its neighbors. It was rechristened Castrovirreina in the 16th century. The *Chanca* believed that their ancestors had come from the lake for which it is named (*Quechua*, COQLYOQOCA, "green-corn lake").

(*24*) *Chocorvo* (*Chocoruo, Chocorbo, Chucurpu*). The *Inca* province of this name included the *Chocorvo, Huacho* (*Guacho*), and *Huaytara*. The *Chocorvo* spoke their own language (RGI, 1881–97, 1: 61), and their traditions told of former conquests under a chief called Asto Capac. (Señores, 1904, p. 200.)

(*25*) *Vilcas* (*Villcas, Bilcas, Vilcashuaman, Vilcasguaman*). The *Inca* province was largely peopled by colonists, including *Anta* and other "big ears." The original inhabitants were called *Tanquihua*, and had their own language. Both *Quechua* and *Aymara* were in general use in the province. The capital, also called Vilcas, Tambo de Vilcas, or Vilcasguaman, was one of the largest *Inca* towns north of Cuzco, an important road junction, and reputed to be the center of the Empire. Huamanga (Guamanga, from *Quechua* WAMAÑQA; modern Ayacucho) was founded at a place called Pocra (POQRA) in this province. (RGI, 1881–97, 1: 96–138, 145–168; Cieza, 1554, bk. 1, ch. 89; Garcilaso, 1723, pt. 1, bk. 5, ch. 24.)

(*26*) *Rucana* (*Lucana*; probably from *Quechua* ROK'ANA, "finger"). The province of *Rucana* was divided into three sections, upper and lower *Rucana* and ANTA-MARKA (Andamarcas). A number of local languages were spoken, and *Quechua* was used as a general language. The *Rucana* furnished litter bearers to the Emperor as their share of the labor service. (RGI, 1881–97, 1: 179–213.)

(*27*) *Sora*. This province was also divided into three sections: upper and lower *Sora* and *Chalco*. It had about 4,000 tribute payers in *Inca* times. The natives had their own language, but used both *Quechua* and *Aymara* also. (RGI, 1881–97, 1:169–177; Sarmiento, 1906, ch. 35.)

(*28*) *Chanca* (*Changa*). The *Chanca* province was also called Andahuayla (Andaguayla, Andauayla, Andabaila, Antahuaylla), from its capital. The *Chanca* believed that they had come originally from Choclococha on the other side of Vilcas. They embarked on a career of conquest about the same time that the

Inca did, and drove the original *Quechua* inhabitants out of Andahuaylas. At the end of Viracocha's reign, they nearly destroyed the *Inca* state. (Cieza, 1554, bk. 1, ch. 90; Sarmiento, 1906, ch. 26.)

(*29*) *Vilcapampa* (*Vilcabamba*; probably from *Quechua* WIL'KA-PAMPA, "valley of the narcotic berry"). A mountainous province northwest of Cuzco where the *Inca* dynasty took refuge after the Spanish Conquest and continued to keep up an independent state for nearly 40 years. (See this volume, pp. 343–345). Its capital was called Vitcos (Bitcos, Biticos, Pitcos). (See Cobo, 1890–95, bk. 12, ch. 12; Calancha, 1638, bk. 4, chs. 2–10; Bingham, 1912.)

(*30*) *Quechua* (*Quichua*, *Quichiua*). The *Quechua* lived around Abancay and Curahuasi in a region of semitropical climate. Their name (in *Quechua*, QHICWA) seems to have meant "warm valley [people]," and was probably applied to them by their *Inca* neighbors. About the beginning of the 15th century, the *Quechua* seem to have been one of the largest and most powerful tribes in their part of the Andes. Their territory included the province of *Chanca* (*Andahuayla*) on one side, and probably that of *Cotapampa* on the other, at a time when the *Inca* state was small and only just beginning to show strength. It was probably at this time that their name was applied to the language which the *Inca* later spread all over their Empire. Early in the 15th century, however, the *Chanca* attacked the *Quechua* from the west and drove them out of the province of *Andahuayla*. This defeat broke the *Quechua* power once and for all, and left the way open for the *Inca* to assume the leadership of the *Quechua*-speaking peoples. The *Inca* and *Quechua* seem to have had an alliance at the time of the first *Chanca* attack, which may have been one reason why the war between the *Inca* and *Chanca* culminated in an *Inca* victory in 1438. The *Quechua* were made "Incas by privilege" by Pachacuti. (Cieza, 1880, pt. 2, chs. 34, 37; Garcilaso, 1723, pt. 1, bk. 3, ch. 12; Poma, 1936, pp. 85, 337; Pachacuti, 1879, p. 318; Sarmiento, 1906, ch. 44.) *Quechua* first appears as the name of the *Inca* language in documents of 1560 (Santo Tomás, 1891, p. 1). The triple meaning of the word *Quechua* in the 16th century (a geographic region, a tribe, and a language) is a potential source of confusion which must be duly guarded against.

(*31*) *Yanahuara* (*Yanaguara;* probably from *Quechua* YANAWARA, "black breechclout"). The *Yanaguara* were "Incas by privilege." (Poma, 1936, pp. 85, 337. See also Garcilaso, 1723, pt. 1, bk. 3, ch. 10.)

(*32*) *Lare* (*Lari*). A tribe of "Incas by privilege" in the Lares Valley, northeast of Cuzco. (Poma, 1936, pp. 85, 337.)

(*33*) *Cusco* (*Cuzco, Cozco;* from *Quechua* QOSQO, no meaning). The area so marked on the map was probably neither a provincial nor a tribal unit. It is the area close to the capital where old tribal lines were so broken up by Pachacuti's resettlement program that it is not possible to distinguish the old groups. A number of tribal names are known for this area, but many of them may refer to the same tribe. The *Ayamarca* (*Ayarmaca*), *Huayllacan* (*Guayllacan*), *Hualla* (*Gualla*), *Inca* (*Inga*), *Quehuar* (*Quiguar, Queuar*), *Huaroc* (*Huaruc, Haroc*), and *Quispicanchi* probably all lived in and near the valley of Cuzco. The *Anta, Mayo, Tampo* (*Tambo*), *Sanco* (*Tanco, Canco*), *Quilliscachi,* and *Equeco* (*Equequo*) lived in and around the valley of Anta (also called Zúrite, Jaquijahuana, Xaquixaquana, Sacsahuana, etc.). *Mara, Poque,* and other tribes are also mentioned for this area. All these people seem to have spoken *Quechua*, and all were *Inca*, either by blood or by privilege. (Pachacuti, 1879, p. 318; Poma, 1936, pp. 84–85, 337, 347; Garcilaso, 1723, pt. 1, bk. 1, chs. 20, 23; Morales, 1866; Toledo, 1940; Sarmiento, 1906, chs. 13–35.)

(*34*) *Paucartampo* (*Paucartambo, Paucartampu*). Its existence as a separate province is doubtful, but I have found no grounds for attaching it to any of the neighboring units. It may have been inhabited by *Poque*. (Garcilaso, 1723, pt.1, bk. 1, ch. 20.)

(*35*) *Cavina* (*Cauina, Cabina, Caviña, Cauiña, Cabiña*). A tribe in the Vilcañota Valley in the neighborhood of Quiquijana. They were "*Inca* by privilege" and believed in reincarnation. (Cieza, 1554, bk. 1, ch. 97; Sarmiento, 1906, ch. 23; Poma, 1936, pp. 85, 337, 347; Pachacuti, 1879, pp. 269, 279.)

(*36*) *Chilque* (*Chillque, Chilqui*). This area was a province under the colony, and may have had the same status in *Inca* times. It was the home of a number of small tribes in addition to the one for which it is named: *Masca, Aco, Papre* (*Papri, Pabre*), *Cuyo*, and probably others. Pacaritampo, where the *Inca* believed that their ancestors had emerged from the earth, was in this province, and the inhabitants spoke *Quechua*. They were "Inca by privilege." (Señores, 1904, p. 200; Poma, 1936, pp. 84, 85, 337; Pachacuti, 1879, p. 318.)

(*37*) *Cotapampa* (*Cotabamba*). A people named *Cotanera* are usually named with the *Cotapampa*, and may have lived in the same district. It is not certain what language the two tribes spoke; Garcilaso (1723, pt. 1, bk. 3, ch. 12) says they belonged to the *Quechua* nation, but the cota- element in their names looks like *Aymara* "qota," the equivalent of *Quechua* QOCA, "lake." (Calancha, 1638, bk. 2, ch. 8; Sarmiento, 1906, ch. 35.)

(*38*) *Omasayo* (*Omasuyo, Vmasuyu*). This tribe must be distinguished from the inhabitants of the *Aymara* Province of Omasuyo on the east shore of Lake Titicaca. The names are frequently indistinguishable in the chronicles. (Calancha, 1638, bk. 2, ch. 8; Garcilaso, 1723, pt. 1, bk. 3, ch. 11; Sarmiento, 1906, ch. 35.

(*39*) *Aymará* (plural *Aymaraes, Aymarays*). One of the most exasperating questions in Andean historical geography is whether there is any connection between the tribe called *Aymará* and the *Aymara* language. Sir Clements Markham (1871, pp. 327–36) believed that the *Aymará* tribe spoke *Quechua*, and that their name was transferred to the *Aymara* language by the Jesuits of Juli late in the 16th century, because they failed to distinguish clearly between some *Aymara* colonists settled at Juli by the *Inca* and the local inhabitants. This theory is highly questionable, however, and there is no evidence that the *Aymará* tribe spoke *Quechua*. It is perfectly possible that they spoke an *Aymara* dialect in the 15th century. Unfortunately, none of the chroniclers describes the linguistic condition of this area, and the problem may never be definitely solved. (Calancha, 1638, bk. 2, ch. 8; bk. 3, ch. 37; Sarmiento, 1906, chs. 1, 35; Poma, 1936, p. 327; Pachacuti, 1879, p. 279; Garcilaso, 1723, pt. 1, bk. 3, ch. 10.)

(*40*) *Parinacocha* (*Parihuanacocha*). This area includes the *Pomatampo* (*Pumapampu, Pomatambo*), and it is not certain whether they formed a separate province or not. The names are probably of *Quechua* derivation, from PARIWANA-QOCA, "flamingo lake," and POMA-TAMPO, "wild-cat lodge." (Garcilaso, 1723, pt. 1, bk. 3, ch. 9; Pachacuti, 1879, p. 279.)

(*41*) *Contisuyo* (*Condesuyo, Cuntisuyu, Condes*). This province included *Alca* (*Allca*), *Cotahuasi* (*Cotaguasi*), and *Aruni* (*Arones*). (Garcilaso, 1723, pt. 1, bk. 3, chs. 8–9; RGI, 1881–97, 2: 12–18.)

(*42*) *Chumpivilca* (*Chumbivilca, Chumbivillca*). The *Chump vilca* had their own language, and used *Quechua* and *Aymara* as general languages. They were famous dancers, and paid their labor tax by dancing for the court. (RGI, 1881–97, 2: 21–36; Cobo, 1890–95, bk. 12, ch. 33.)

(*43*) *Cavana* (*Cabana, Cauana*). The *Cavana* must not be confused with the *Caviña*. Their province was often called Cavana Conde (i. e., *Cavana* of Contisuyu) to distinguish it from Cavana Colla (*Cavana* of Collasuyu), a settlement of *Cavana* colonists in the province of Collas, near modern Cavanillas. The *Cavana Conde* were included in a single province with the *Collagua* in Colonial times. They deformed their heads, and spoke a corrupt *Quechua*, but had several local languages of their own. (RGI, 1881–97, 2: 38–49.)

(*44*) *Arequipa* (*Ariquepa, Ariquipay*). The usual derivations of its name are completely fanciful. ARI is *Aymara*, and means "needle" or "peak" (i. e., Mount Misti); QIPA is a *Quechua* affix meaning "behind." The valley of Arequipa seems to have been nearly depopulated by a volcanic eruption when the *Inca* first entered it in the time of Pachacuti, and it was resettled with colonists from the Highland provinces, some of whom spoke *Quechua*, others *Aymara*. (Pachacuti, 1879, p. 279; Morúa, 1922-25, bk. 4, ch. 11.)

Coastal divisions.—The best systematic description of the Coast valleys is given by Cieza (1554, bk. 1, chs. 66–75). As very little detailed information is available for individual valleys, many of them are simply named in the following list:

(*1*) *Tumbez* (*Tumbes*, *Tumpiz*), the northernmost valley on the desert Coast.

(*2*) *Chira.* Its chief town was Sullana (Solana).

(*3*) *Piura.* (RGI, 1881–97, 2: 225–42.)

(*4*) *Olmos.* An oasis at the foot of the mountains.

(*5*) *Lambayeque.* A large multiple valley. It had a long dynasty of legendary local chiefs before it was conquered by the *Chimu* king about 1460. Its history, which is very important for chronology, is preserved by Cabello Balboa (ms. III, 17; and see Means, 1931, pp. 50–55). The language spoken was *Mochica* (Carrera, 1939).

(*6*) *Pacasmayo.* Another large valley which formed part of the *Chimu* Kingdom. Its customs are described in admirable detail by Calancha (1638, bk. 3, chs. 1–4), and will be referred to below, pp. 000–000. The people spoke *Mochica.* The valley is also called Jequetepeque (Xequetepeque).

(*7*) *Chicama.* This valley is continuous with the valley of Chimu.

(*8*) *Chimu* (*Chimo;* also called Moche, Trujillo, or Santa Catalina). This was the home valley of the *Chimu* kings who built up a dominion reaching from Tumbes to Parmunca in the 15th century. Their capital was Chanchan, near modern Trujillo. They spoke *Quingnam,* a language probably related to Mochica. It survived in the valley until the 19th century (Squier, 1877, p. 169). (See Calancha, 1638, bk. 3, ch. 2: Sarmiento, 1906, chs. 38, 46; Cieza, 1880, bk. 2, ch. 58.)

(*9*) *Virú.* Also called Guañape (Guanape, Huanapu).

(*10*) *Chao.* Also called Suo.

(*11*) *Chimbote.* Also called Santa (Sancta).

(*12*) *Nepeña.* Also called Guambacho.

(*13*) *Casma.*

(*14*) *Huarmey* (*Guarmey*).

(*15*) *Parmunca* (*Paramonga*). Also called Fortaleza. In this valley stands a famous ruined fort, described frequently in the chronicles. (Cieza, 1554, bk 1, ch. 70; Calancha, 1638, bk. 3, ch.2; Garcilaso, 1723, pt. 1, bk. 6, ch. 33.) It is supposed to have marked the *Chimu* frontier. The valley of Huaman (Guamán; probably from *Quechua* WAMAÑ, "hawk"), also called Barranca, is so near Parmunca that it is not listed separately.

(*16*) *Huaura* (*Guaura*). Also called Huacho or Supe. Calancha (1638, bk. 3, ch. 18) gives information about religion.

(*17*) *Chancay.* Not to be confused with the Chancay River in Lambayeque Valley.

(*18*) *Lima* (*Rima*, *Rimac;* from *Quechua* RIMAQ, "speaker," "oracle"). This is a large double valley and had a population of about 150,000 in *Inca* times, to judge by the fact that it was divided into three HONO units. Two languages were spoken. (Cobo, 1935, bk. 1, ch. 7; Calancha, 1638, bk. 1, ch. 37.)

(*19*) *Lurin.* Pachacamac, the most famous shrine on the whole coast, stood here, and the *Inca* made it an important administrative center. It has quite an extensive bibliography. (See Cieza, 1554, bk. 1, ch. 72; Calancha, 1638, bk. 2, ch. 19; and the Conquest witnesses cited in Uhle, 1903.)

(*20*) *Chilca* (*Chillca*). Below Lurin is a spot in the desert where the water table is so near the surface that crops can be grown if the sand is dug down a short distance. It is not really a valley, as no river flows through it. The ingenuity of its water supply greatly impressed the Spaniards. (See Cieza, 1554, bk. 1, ch. 73.)

(*21*) *Mala.*

(*22*) *Huarco* (*Guarco*), also called Runahuana (Lunahuana, Lunaguana, Runahuanac) and Cañete. A large and important valley which put up a stubborn resistance to the *Inca.* (See Cieza, 1554, bk. 1, chs. 73–74; 1880, bk. 2, ch. 59.)

(*23*) *Chincha.* Another large valley with a powerful chief. It had a population of about 50,000 in *Inca* times, for its chief was a HONO KORAKA. (Castro and Ortega Morejón, 1936; Cieza, 1880, bk. 2, ch. 59.)

(*24*) *Pisco.*

(*25*) *Ica.*

(*26*) *Nazca.*

(*27*) *Acari.* Also called Lomas.

(*28*) *Yauca.*

(*29*) *Atico.*

(*30*) *Caraveli.*

(*31*) *Ocoña.*

(*32*) *Camana.* Part of this valley was inhabited by a people called *Mage* (*Maje*), for whom the river of Camana is named. Higher up are the *Cavana.* (Calancha, 1638, bk. 3, ch. 30.)

(*33*) *Quilca* (*Quillca*). The river divides into several branches: Sihuas (Siguas), Vitor, and Chili being the principal ones. *Sihua* may be a tribal name. Arequipa is on the upper Chili River.

(*34*) *Tampo* (*Tambo*).

(*35*) *Moquehua* (*Moquegua*).

(*36*) *Locumba.*

(*37*) *Sama.*

(*38*) *Arica.* There were some *Aymara*-speaking colonists in this valley. Beyond Arica is a long stretch of very dry coast which supported only scattered fishing villages until the nitrate boom in the 19th century. This region is generally called Tarapaca from a small oasis below Arica. (RGI, 1881–97, appendix 3, pp. xxv–xxvii.)

Bolivian Highland divisions.—In addition to the tribes and valleys already listed, it will be well to list the provinces of the Bolivian Highlands where *Aymara* was not the native language. The *Aymara*-speaking provinces are listed under The *Aymara*, pp. 501–573.

(*1*) *Cochapampa* (*Cochabamba, Cotabamba*).

(*2*) *Yampará* (*Yanpará*). These people occupied the valley in which Chuquisaca (Sucre, La Plata) stands. Many colonists were settled here by the *Inca.* (Calancha, 1638, bk. 2, ch. 40.)

(*3*) *Chicha.* The *Chicha* paid their labor tax by furnishing carved logs of red wood for sacrifice in Cuzco. (Cobo, 1890–95, bk. 12, ch. 33; RGI, 1881–97, vol. 2, appendix 3, p. xliii.)

(*4*) *Lipe* (*Lipes, Lipez*). Some *Aymara* was spoken in this province. (RGI, 1881–97, vol. 2, appendix 3, pp. xxii–xxiii.)

PRINCIPAL SOURCES

All modern accounts of *Inca* culture either concern a limited part of the subject or are based on a very small part of the available source material. The best known to American readers are Murdock, 1934, ch. 14; Thompson, 1936; Means, 1931; Mead, 1924; Prescott, 1908; Baudin, 1928; and Markham, 1910. Other modern writings on the *Inca* are numerous and can be conveniently found in the bibliographies of Means, 1931, and Baudin, 1928. A few are listed in the bibliography to this section.

Because of the limited usefulness of most secondary treatments, the reader desiring a comprehensive view or even searching for comparative material on some aspect of *Inca* life will find it necessarry to consult the sources himself. The original documents are so numerous and so varying in reliability that the task of consulting them cannot be undertaken lightly.

There are two indispensable bibliographical handbooks which list the published editions of the sources on Andean history and culture. P. A. Means' "Biblioteca Andina," 1928, lists the principal chroniclers in alphabetical order. For each, he gives a short biographical notice, a list of works relating to Andean antiquity, the most important published editions of these works, and remarks on the material they cover and its quality. The Biblioteca Andina is now a little out of date, and the author's critical judgment of some writers must be accepted with some reservation. His classification of the chroniclers into a "Garcilassan School" and a "Toledan School" is without sufficient basis, and its implication that writers who were not personal sympathizers with the *Inca* system cannot be relied upon has led Means to accept the theories of some very dubious authors like Garcilaso, Valera, and Montesinos. The "Biblioteca Andina" remains the best thing of its kind in English, however.

Father Ruben Vargas Ugarte's "Historia del Perú: Fuentes," 1939, is an annotated bibliography of the whole history of Perú, with a few remarks about most of the authors, and very useful indices of Peruvian material in the general collections of documents. It has a good index of names. It is, however, so condensed that things are sometimes found with difficulty and its bibliographical citations are too brief, but it is a mine of information if properly used. Less accurate but extremely useful also is the critical list of sources in Chapter 1 of Baudin, 1928.

It should be borne in mind that for the pre-Spanish period, we have no first-hand account, except for the eyewitness descriptions of some aspects of *Inca* ceremonial left by a few of the Spanish soldiers who accompanied Pizarro. For other aspects of the culture, the Spanish sources are translations and modifications of the testimony of Indian witnesses whose veracity it is very difficult to judge at this distance. In addition, 16th- and 17th-century writers copied liberally from one another, often without giving credit, so that many works which are usually termed "sources" or "documents" are only third- or fourth-hand restatements of the original testimony, marred by carelessness and by personal or political prejudice. It is most important to weigh the antecedents of all this old material and use it with discrimination.

Many of the more important Spanish chroniclers have been translated into English, mostly by Sir Clements Markham and P. A. Means (see references in Means, 1928), and so are available to persons who do not read Spanish. It is wisest, however, to consult the original text even when an English translation does exist, for much often depends on details of wording, and none of the translations is entirely accurate. Means' translations are generally reliable, but Markham's are so poor as to be nearly worthless for anything but a hasty impression of the author's meaning. The frequently cited translations into French by Henri Ternaux-Compans are even worse. (See remarks in Means, 1928, pp. 325, 409, and passim.)

Many of the chronicles remained in manuscript until modern times, and a few very important ones have not yet been printed in full. Modern editions from such manuscripts vary considerably in accuracy. The Spanish of the manuscripts is usually full of abbreviations and inconsistencies of spelling, and the frequent occurrence of *Quechua* words makes editing especially difficult. Only a few really good critical texts exist (Avila, 1939; Castro, 1936; Sarmiento, 1906; Estete, 1918), but the partially modernized versions of Márcos Jiménez de la Espada and a few other conscientious editors are adequate for most purposes. Cheaply printed editions have also been published in Lima by H. H. Urteaga and Carlos Romero.

Of all works, ancient or modern, the "Historia del Nuevo Mundo," by the Jesuit Father Bernabé Cobo, written about 1653 and published in 1890–95 in four volumes, is still the best and most complete description of *Inca* culture in existence. It is so clear in its phrasing and scientific in its approach that it is pleasant as well as profitable to work with. As Father Cobo explains, it is based in part on personal research in Cuzco about 1610 and at Juli, Lima, and other places, and on the manuscript works of Juan Polo de Ondegardo and Cristóbal de Molina of Cuzco, both painstaking investigators whose value can be checked from manuscripts surviving independently of Father Cobo's work. He also used the records of several government investigations of *Inca* customs, and the published works of such men as Cieza de León (Cieza, 1554, bk. 1), Garcilaso, Acosta, and others. Two whole volumes of Cobo's work are devoted to geography, ethnobotany, animals, rocks, fish, and similar material. The only serious fault in Cobo's account of the *Inca* is that he made the mistake of following Garcilaso in dating the *Chanca* war at the end of Yahuar Huacac's reign instead of at the end of Viracocha's, so that the central history of the *Inca* is somewhat distorted. Cobo also wrote a work on Colonial Lima (Historia de la Fundación de Lima, 1882), which I have cited as Cobo, 1935.

The rest of the important chroniclers are best listed chronologically beginning with the earliest. Estete, 1918; Sancho, 1917 b; Xérez, 1917; and the Anonymous Conqueror, 1929, were all eyewitnesses of the Conquest who wrote down their impressions immediately. Their descriptions provide a valuable check on subsequent writers. Pedro Pizarro, 1844, and Cristóbal de Molina of Santiago, 1916, were other eyewitnesses who wrote somewhat later (1570 and about 1556, respectively). Their descriptions are more complete but seem somewhat less reliable than those of the earlier four.

The first great general work on Perú was written by Pedro de Cieza de León in 1551. Its author was a soldier who had traveled all over the Andean area, honest, conscientious, and thorough. The first two parts of his "Cronica del Perú," the geographical description, published first in 1553, and the history of the *Inca*, which remained in manuscript until 1880, are the most useful for our purposes. They are cited as Cieza, 1554, and Cieza, 1880, respectively. Cieza is very reliable, but tends to generalize instead of giving specific examples, which is a little annoying. He is our principal source for the outlying provinces of the *Inca* Empire. Contemporary with Cieza is Juan de Betanzos, part of whose "Suma y Relación" was published in 1880. It also was written about 1551. Betanzos married a daughter of Atahuallpa and had exceptional opportunities for the investigation of *Inca* antiquities. He is especially useful for *Inca* legends.

Juan Polo de Ondegardo was a lawyer and government official at Cuzco who made exhaustive inquiries about *Inca* government and religion in the 1550's. He wrote a number of reports between 1561 and 1571, some of which have been found and published (Polo, 1916 a and b; 1917 a and b; 1940). He is generally reliable, but his style is very obscure and difficult. Both Acosta and Cobo used him very heavily.

A few writers who never went to Perú themselves deserve notice because of the care with which they collected and used the reports of others, the originals of which have since disappeared. The two most important are Oviedo, 1851–55, and Las Casas, 1892 and 1909. Both wrote in the first half of the 16th century. Las Casas' manuscript was heavily drawn upon by subsequent writers like Roman y Zamora, 1897.

Francisco de Toledo, Viceroy of Perú from 1569 to 1582, had careful inquiries made about *Inca* customs and history which are among the most valuable records we have. Toledo is a much-discussed figure, about whose character there is considerable disagreement. (Cf. Means, 1928, pp. 479–97; Levillier, 1935.) It seems not to have occurred to his detractors, however, that a man can be narrow-minded and cruel in public life and still demand a high standard of honesty in official reports presented to him. The "Informaciones" prepared at his order (Toledo, 1940) and Pedro Sarmiento de Gamboa's "History of the Incas" (Sarmiento, 1906), also written for him, are both detailed and accurate, as a comparison of them with Cieza de León's earlier work will readily show.

Cristóbal de Molina of Cuzco wrote a very valuable account of *Inca* religion about 1579 (Molina of Cuzco, 1913). In 1586, Father Miguel Cabello de Balboa finished his "Miscelánea Antártica," still in manuscript, which contains one of the best accounts of *Inca* history we have, and some interesting information on the north coast. Cabello used Sarmiento's manuscript. (Cabello, ms; and a bad French abridgement, 1840). José de Acosta wrote his "Historia Natural y Moral de las Indias" in 1590; it contains some important chapters on the *Inca*, based largely on Polo de Ondegardo's work (Acosta, 1940).

The 17th-century chroniclers are in general much less reliable than the 16th-century ones, with the exception of Father Cobo. The difference is especially marked in the field of *Inca* history. Martín de Morúa wrote a history between 1590 and about 1605 which is rambling and confused but contains valuable information on *Inca* customs. He also preserves some important *Quechua* texts (Morúa, 1922–25)."Fray Antonio," a priest who wrote in 1608, has been given far more credit than he deserves. He is extremely unreliable. (Antonio, 1920; cf. Means, 1928, pp. 328–30; Levillier, 1942.)

Garcilaso de la Vega (1723) was the son of a Spanish soldier and an *Inca* princess. He left Perú in 1560 and spent the rest of his life in Europe, writing his "Royal Commentaries" in his old age. He has long enjoyed an undeserved position of authority in matters relating to the *Inca* (Means, 1928, pp.367–81; Levillier, 1942; Rowe, 1945). He is useful for those aspects of *Inca* life which survived into the Colonial Period and which he saw with his own eyes, but his accounts of *Inca* history and religion are entirely fanciful. The best parts of the book are the descriptions of plants and animals and of the *Inca* and Colonial monuments of the city of Cuzco. One of Garcilaso's most important sources was a Jesuit named Blas Valera, whose veracity has been widely accepted because of the praise Garcilaso bestowed on him. (See Means, 1928, pp. 497–507.) Valera's claims will not stand criticism, however. I have cited one of his reports, written about 1590, in the section on religion (Valera, 1879).

Juan de Santacruz Pachacuti (1879) wrote early in the 17th century. He was an Indian from Canas, and wrote abominable Spanish much mixed with *Quechua* phrases. Although his "Relación" is confused and difficult to use, it contains valuable material on *Inca* history and religion, and some important *Quechua* texts. Another Indian writer of about the same date and of similar usefulness is Felipe Guaman Poma de Ayala (Poma, 1936). His monumental work of over 1,000 pages is illustrated with full-page pen and ink drawings which provide some of our best illustrations of *Inca* life. The illustrations are much more reliable than the text, which is even more confused than that of Pachacuti. Poma is very unreliable on history, better on administration, and perhaps best on religion and daily life.

Alonso Ramos Gavilán wrote a history of Copacabana in 1621 which contains important material on *Inca* history and religion. He is verbose but reliable. Juan Anello Oliva wrote a work on *Inca* history in 1631 which was not published until 1895. It is largely based on Garcilaso, but contains a little original material, especially legends. Antonio de la Calancha, 1638, is very important for tribal distributions, legends and religious customs of the Coast, ethnography of Pacasmayo, and the history of the *Inca* in the Colonial Period.

Fernando Montesinos, who wrote about 1642 (Montesinos, 1882), pretends to give a long list of pre-*Inca* kings, which has been accepted at face value by a number of historians of the *Inca.* Whatever the value of this list may be for the study of Indian legends, it is worthless as history, and I am inclined to be suspicious of his incidental remarks on Indian customs.

In the century after the Conquest, the Catholic missionaries in Perú made a determined effort to stamp out the extensive survivals of the ancient religion which lingered very late in the country districts, and we have many useful reports growing out of this campaign. Most of them deal with native religion on the Coast and in central and northern Perú. (Arriaga, 1920; Avila, 1939; Religiosos Agustinos, 1865.)

For all areas outside of Cuzco, our best sources are the descriptions of individual provinces made at various times for the information of the Spanish King, and published in four vloumes by Marcos Jiménez de la Espada under the title of "Relaciones Geográficas de Indias" (1881–97). In order to simplify reference, documents in this collection are not cited separately, and the abbreviation RGI is used to refer to the collection.

In addition to the sources listed in this section, a great many documents useful for limited aspects of the subject are cited throughout the text, and they will be found listed in the general bibliography. Where possible, I have cited the chroniclers by book and chapter instead of by volume and page, so that readers using different editions of the texts can locate the references with equal facility. Where a page number is used in a citation it is preceded by the abbreviation p. or pp., or if following a volume, book, or chapter number, by a colon.

ARCHEOLOGY

Cuzco archeology is at present in that tantalizing state where its chronology has been pretty satisfactorily determined in outline, but we know very little about the material culture of most of the periods. Enough has been done, however, to show that *Inca* civilization was the product of a long development in the valley of Cuzco itself, and that consequently it is unnecessary to look farther afield for that civilization's cultural origins.

The last two periods now distinguishable at Cuzco cover the more or less historic time when Cuzco was under the *Inca* dynasty, from about A. D. 1200 to the coming of the Spaniards about 1532. Between the earlier of these *Inca* Periods and the pre-*Inca* culture of the area is a gap in our chronology of unknown length, during which important changes in art and technology must have taken place. The pre-*Inca* culture is also isolated at the other end, as we know nothing of its cultural antecedents. No reliable evidence bearing on the question of the antiquity of man or the origin of agriculture has yet been reported from any part of the area dealt with in this section.

Chanapata Period.—The pre-*Inca* culture known from the valley of Cuzco is called Chanapata (see Bennett, this volume, p. 143), after the site on the northwestern edge of the city of Cuzco, where it was first identified. It is a habitation site covered with 3 to 6 feet (1 to 2 m.) of stratified rubbish and unaccompanied seated flexed burials. Although four other sites of the same culture are known, extending its area to Maras, some 20 miles (30 km.) north of Cuzco, and Ayavire, perhaps 200 miles (300 km.) south, the only excavations made to date consist of a single test-trench in the type-site of Chanapata, so that no really adequate description is possible.

The locations of the known sites near good agricultural land where game is not particularly plentiful suggest that the people of Chanapata practiced agriculture, and great quantities of llama bones show that they kept large numbers of domestic animals. Pottery is well made and abundant, and a high percentage of decorated ware is found in the refuse, but so far no metal. It is possible that the Chanapata people were ignorant of metal; at most, it had little importance for anything but ornament, for a large quantity of bone tools, chipped obsidian points, and a few ground-stone objects pretty well cover the cutting needs for which metal tools were made in later times. The bonework includes a number of spear-thrower hooks.

Very few remains of buildings have been identified as belonging to the Chanapata culture, and they are all parts of retaining walls of small field stones laid in mud. The retaining walls seem not to have held up simple agricultural terraces, but rather raised substructures and the sides of sunken courts. No worked building stones have been found as yet, and no sculpture in stone above the size of a figurine. The typical decorated pottery is a polished black ware with applied relief ornaments and simple geometric or animal designs incised on the outer surface. There is also some red ware with simple geometric designs in white on a red background. The cooking ware has a brushed surface and punctate ornament with occasional bits of modeling. Flat plates and straight-sided bowls are the most common decorated shapes, and are notable for their heavily thickened rims. A few very well-made solid human figurines and large modeled ornaments were also made from pottery. The closest relations of the Chanapata style seem to be with Chiripa in Bolivia (Bennett, 1936, figs. 27–29, and this volume, p. 118); next, with the Chavín style of northern Perú (Tello, 1943); very distantly with Pucara, its nearest neighbor; and not at all to Tiahuanaco. No trade sherds of any of these styles were found (Rowe, 1944).

Early Inca period.—The Early *Inca* archeological material probably corresponds to the historical period of about 1200 to c. 1438, which saw the gradual establishment of *Inca* hegemony in the region of Cuzco. Many of the sites occupied in this period continued in use right down to the Spanish Conquest, and some good stratigraphic work should be possible at such places as QINCA-QINCA in the Cuzco Valley near San Gerónimo. Three sites have been listed where the Early *Inca* material is found pure; one of them is a small area within the Late *Inca* fortress of Sacsahuaman, obviously unconnected with the better-known later fortifications, and here the only excavations in Early *Inca* rubbish have been made. Metal is rare, and bone tools common; wall foundations are of uncut field stones; burial was generally in small beehive-shaped masonry tombs built in cracks in the sandstone cliffs and roofed with crude corbel vaults. The bodies were wrapped in cloth and matting to hold them in the seated flexed position used in all periods at Cuzco. An important diagnostic trait of this period is a stubby ground-slate knife with a straight cutting edge, a curved back, and one end notched for lashing to a wooden handle.

Early *Inca* pottery is classified as the Killke Series, from a site near Cuzco where I first noted its separate character. It is a carelessly executed ware, with a well-smoothed surface for the decoration, painted in black, red and black, or red, black, and white on the natural buff color of the clay, or in black or red and black on a white background. The designs are linear and entirely geometric; they display some relationship to the presumably contemporary Collao black-on-red, common in the Department of Puno, and to some of the characteristic motives used by Late *Inca* potters. It seems probable that a complete transition from Early to Late *Inca* types will someday be traced, and such a transition would be entirely natural. The cooking ware is very rough, decorated only with occasional round punch marks on the handles of deep plates. The shapes of the pottery in this period resemble those common in the next period, but the plates are deeper (Rowe, 1944, addenda).

Late Inca period.—The Late *Inca* Period lasted from c. 1438 to the arrival of the Spaniards and perhaps even later in some areas. During this time, the *Inca* spread their culture by conquest throughout the greater part of the Andean area, and Late *Inca* material is abundant at many sites far removed from Cuzco: Chile, Ecuador, and the Peruvian Coast. Because of its imposing quality and wide distribution, the Late *Inca* style was one of the first to be identified in Peruvian archeology, and Late *Inca* material is fairly common in collections all over the world.

Architecture of this period is famous for the fine stone cutting employed and the close fitting of very large irregularly polygonal blocks. Agricultural terraces, temples, forts, government buildings, storehouses, roads, and carefully laid out towns are common in the neighborhood of Cuzco, and have been well and frequently illustrated. (See Bingham, 1913, 1916, 1930; Fejos, 1944; Rowe, 1944.) No Late *Inca* burials from near Cuzco have been scientifically excavated, but the Bingham expedition dug a number of tombs of this period near Machu Picchu, in which the bodies were placed under overhanging rocks in a seated, flexed position, and surrounded with pottery, stone, and copper objects (Eaton, 1916).

The individual objects and techniques of Late *Inca* material culture will be described under the proper headings below. In the textile art and metallurgy, the *Inca* craftsmen surpassed all peoples in native America. Late *Inca* pottery is classified as the Cuzco Series, and its forms and decorations derive from the preceding period. It has a hard, almost metallic paste, thicker than earlier styles, but of better finish, with designs in black, white, and red. Occasionally, the red is used for a background. On the great majority of Late *Inca* pieces, the same geometric designs are repeated mechanically, with very little variation, but occasional pieces have stylized plant or human figures as well. Most museum collections have been selected for variety, and contain mostly these rare "naturalistic" patterns or other unique pieces, so that it is very easy for anyone who does not handle *Inca* sherds to get a completely false impression of the pottery style. (See Rowe, 1944, for analysis and bibliography.)

Pottery from Cuzco seems to have been widely used throughout the *Inca* Empire, but it never entirely displaced local styles, and generally only served as a convenient source for borrowed motives. In the Department of Puno, for instance, the *Colla* and *Lupaca* continued to make their own distinctive wares, and only an occasional piece betrays its date by a motif obviously copied from the Cuzco Series.

The same is true in the *Chimu* Kingdom on the North Coast. The *Inca* were sufficiently impressed by the *Chimu* potters to bring a group of them to work in Cuzco, and we have a number of their products (see Eaton, 1916, pl. 14), but the foreign styles seem to have influenced the native craftsmen very little.

The sequence of cultures described for Cuzco rests on quite convincing archeological evidence. At Chanapata, pure Chanapata type refuse was covered by a disturbed layer including a mixture of Early and Late *Inca* and Colonial pottery, indicating definitely that the Chanapata material was the oldest. The Late *Inca* material is definitely the latest, for it is found in regions which were only conquered by the *Inca* toward the end of their expansion, such as Highland Ecuador and Chile; and, around Cuzco, it is associated with buildings which are known from historical evidence to have been built by the last *Inca* Emperors. The Early and Late *Inca* materials are closely related stylistically, and the known associations in the ground (three pure Early *Inca* sites, one rubbish pit with a mixture of Early and Late *Inca* rubbish, and several sites with surface indications of both styles) bear out the assumed chronological position of the styles. The evidence is reviewed in more detail elsewhere (Rowe, 1944).

HISTORY OF THE ANDEAN AREA TO 1532

Archeological discoveries of the past 50 years have made it plain that civilization is very old in the Andean area and that the cultures which the Spanish conquerors found and described were the end product of long local development. Unfortunately, the Andean Indians had no writing and little interest in the past, so that most of the history of Andean culture will always have to be restored from archeological evidence. There is no doubt, however, that far more historical information was available to the Spanish writers of the 16th century than has come down to us, and it is to their eternal discredit that more of it was not committed to paper before it was destroyed or forgotten.

Historical records among the Indians generally took the form of genealogical traditions, narrative poems, and statistics preserved by the quipu (*Quechua*, KHIPO), or knot-record. They were explained and transmitted from father to son by trained historians who had memorized them. The obvious possibilities of this method of preserving history and the success with which the *Inca* used it, entitle its results to receive at least as much consideration from the historian as the much more uncritical and meager chronicles which are all we have from some of the greatest Old World users of writing, such as the Chinese and the Hindus. (Cieza, 1880, bk. 2, chs. 11–12; Sarmiento, 1906, ch. 9; Morúa, 1922–25, bk. 2, ch. 15.)

Almost everywhere in the Andean area, comparatively reliable history begins with the *Inca* conquest in the second half of the 15th century. Here and there, as among the *Lupaca* of Lake Titicaca, historical traditions going back of the Conquest a little have been preserved. The most important of these traditions comes from the valley of Lambayeque in the *Chimu* Kingdom, where some very long genealogies were collected by Father Cabello de Balboa (ms., bk. 3, ch. 17; see also Means, 1931, pp. 50–55). It is quite likely that the *Inca* owed their interest in the preservation of history to the Coast people, from whom they also borrowed certain features of political organization.

Along with their soberer history, the *Inca* handed down many legends of gods and heroes, quite similar to those with which the Romans of the time of Augustus filled out the blanks in the early history of their city. Most of these legends deal with the origins of men and customs and the adventures of their more remote ancestors. It is not always easy to draw a rigid line between legend and history, but for the purposes of this summary, the historical period can be said to begin early in the 15th century.

The *Inca* royal family was divided into lineages, each of which included the descendants of a past ruler. As the members of these royal lineages enjoyed an especially privileged position in *Inca* society, they had good reason to keep careful track of the list of rulers, and, with a few qualifications noted below, we are probably safe in accepting the traditional list of rulers as accurate. The list, with the *Quechua* names phonetically written in parentheses, is as follows:

(1) Manco Capac (MAÑKO QHAPAQ); also called Mango Capa, Ayar Mango, etc.
(2) Sinchi Roca (SINCI ROQ'A); Cinche Roca, Sinchi Rocca, etc.
(3) Lloque Yupanqui (LYOQ'I YOPAÑKI); Lloque Yupangue, etc.
(4) Mayta Capac (MAYTA QHAPAQ); Maita Capa, etc.
(5) Capac Yupanqui (QHAPAQ YOPAÑKI); Capa Yupangue, etc.
(6) Inca Roca (IÑKA ROQ'A); Inga Roca, Inga Roca Inga, etc.
(7) Yahuar Huacac (YAWAR WAQAQ); Yaguar Guaca, Inga Yupangue, etc.
(8) Viracocha Inca (WIRAQOCA IÑKA); Biracocha, Uiracocha.
(9) Pachacuti Inca Yupanqui (PACAKOTI IÑKA YOPAÑKI); Pachacutec, Inga Yupangue, etc.
(10) Topa Inca Yupanqui (THOPA IÑKA YOPAÑKI); Tupac Inca, Topa Inga Yupangue.
(11) Huayna Capac (WAYNA QHAPAQ); Guaina Capa, Guayna Cava, Cuzco Viejo, etc.
(12) Huascar (WASKHAR); Guascar.
(13) Atahuallpa (ATAWAL'PA); Atahualpa, Atabalipa, Atagualpa, Atavalpa, etc.

Manco Capac was a demigod who had turned to stone, and the stone was one of the *Inca's* most sacred objects. Bodies purporting to be those of all the other rulers were preserved. The lineages descended from the first five rulers belonged to the Lower Cuzco moiety; the rest to the Upper Cuzco moiety. Huascar's lineage had only one member, and he was not a descendant, while Atahuallpa's descendants were grouped with Huayna Capac's lineage or entirely excluded, so that for all practical purposes, there were only six Upper Cuzco lineages of royal blood (Sarmiento, 1906, ch. 14, and passim). Between Viracocha and Pachacuti, a half-brother of Pachacuti named Inca Urcon (IÑKA ORQOÑ) ruled for a short time, but his name was removed from the official list by Pachacuti. (Sarmiento, 1906, chs. 24–33; Cieza, 1880, bk. 2, chs. 40, 43–46; Pachacuti, 1879, p. 269.)

The beginning of the *Inca* dynasty can be dated about 1200, if the list of *Inca* rulers is accepted in this form. The succeeding rulers are shadowy until the *Inca* began their great expansion under Pachacuti, the ninth Emperor. The following approximate dates[1] are sufficiently exact to be useful:

1438, Pachacuti crowned.
1463, Topa Inca takes command of army.
1471, Topa Inca succeeds Pachacuti.
1493, Huayna Capac succeeds Topa Inca.
1527, Death of Huayna Capac; Huascar succeeds him.
1532, Huascar killed by Atahuallpa after a long civil war.
Coming of the Spaniards.

In early times, neither the *Inca* nor any of their neighbors thought of organizing their conquests as a permanent domain. A defeated village was looted, and perhaps a tribute was imposed on it, but otherwise it was left alone until it recovered sufficient strength to be a menace again. Down to the reign of Pachacuti, towns very near to Cuzco preserved complete freedom of action and raided one another's territory whenever there seemed to be a good opportunity for plunder (Sarmiento, 1906, ch. 24). Yahuar Huacac and Viracocha, Pachacuti's immediate predecessors, enjoyed the services of two very able generals, Vicaquirao and Apo Mayta, cousins and Incas by blood. They were probably responsible for the first attempts to organize conquered territory, at least around the capital itself, and their successful campaigns gave the *Inca* state a political importance it had entirely lacked in earlier times. Other powerful raiding states were growing up in the Titicaca Basin and to the northwest of Cuzco, and the rise of *Inca* power between these areas made a contest for supremacy almost inevitable (Sarmiento, 1906, chs. 23–24).

In the Titicaca Basin, the *Lupaca* and the *Colla* were great rivals, and each hoped to get the *Inca's* aid against the other. Emperor Viracocha, only too glad to fish in troubled waters, negotiated an alliance with the Cari of the *Lupaca*. The *Colla* realized their danger, and determined to attack the *Lupaca* before they could receive *Inca* aid. The *Lupaca* won a great battle near Paucarcolla, however, and so settled the affairs of the district before the *Inca* could interfere (Cieza, 1880, bk. 2, chs. 41–43).

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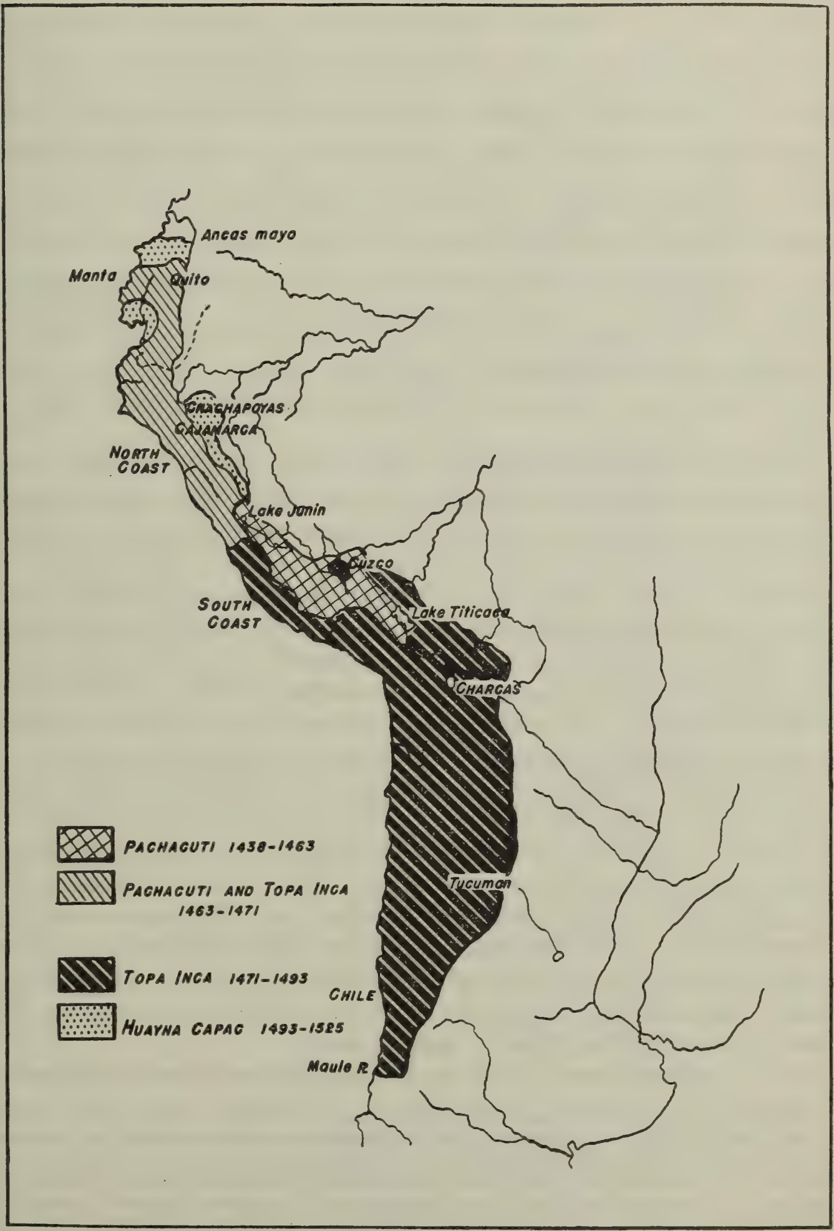
[1] These dates are given by Cabello de Balboa, ms., bk. 3, chs., 9–21, a work written in 1586. They are the most plausible set, ancient or modern, which has yet been proposed. On the subject of dates and *Inca* chronology in general, see Rowe, ms.

To the northwest, the *Quechua* formed a powerful state on friendly terms with its *Inca* neighbors. *Quechua* power was a convenient protection against attack from that side, and *Quechua* territory then extended from Cotapampas to the border of Vilcas. Beyond the *Quechua* were the *Chanca*, who, about the beginning of Viracocha's reign, broke the *Quechua* power in a great battle near the border of the Province of Aymaraes and settled in the former *Quechua* Province of Andahuaylas (Cieza, 1880, bk. 2, ch. 27). The buffer was gone, and Viracocha immediately took steps to strengthen that side of the *Inca* territory by marrying the daughter of the chief of Anta, most important town on the Plain of Anta, and renewing his friendship with the *Quechua* (Sarmiento, 1906, ch. 24).

The *Chanca* attack was delayed until Viracocha was an old man, perhaps with the deliberate intention of striking the *Inca* when their leadership was weak. When it came, the threat was so serious that many *Inca*, including Inca Urcon, the announced heir to the crown, believed resistance was impossible. Viracocha was persuaded that the cause was hopeless and took refuge with Inca Urcon in Caquia-Xaquixahuana, a fort above Calca, which they felt was more defensible than the open valley site of Cuzco. The old generals Apo Mayta and Vicaquirao and a group of important nobles including two of Viracocha's sons, Roca and Yupanqui, refused to leave Cuzco, however, and organized a desperate defense. Yupanqui assumed command and used every inducement to secure allies, even to bribing the *Cana* and *Canchi* to send contingents (Polo, 1917 a, p. 46). The *Chanca* invested the city and tried to take it by storm, but the *Inca* resisted heroically, and, at the critical moment, Yupanqui cried out that the very stones were turning to men to help them. The attack was repulsed, and Inca Yupanqui had the stones from the battlefield collected and placed in the city's shrines. They were called the PORORAWQA (Polo, 1917 a, p. 46; Cobo, 1890–95, bk. 12, ch. 10; Pachacuti, 1879, p. 271). In subsequent battles, the *Chanca* were soundly defeated, and the *Inca* suddenly became the most powerful people in the Andes. Inca Yupanqui had himself crowned in place of his brother, Urcon, and assumed the title of Pachacuti (PACAKOTI, literally, "cataclysm"), by which he is generally known to history. (Cieza, 1880, bk. 2, chs. 44–47; Sarmiento, 1906, chs. 26–29; Cabello, ms., bk. 3, ch. 14; Pachacuti, 1879, pp. 269–72; Betanzos, 1880, chs. 6–10; Las Casas, 1892, ch. 16.)

Pachacuti, a great conqueror and a great organizer, had a son, Topa Inca, as able as himself (map 4). In sweeping campaigns, the father and son extended the *Inca* domain to Quito on the north and Chile on the south, improvising and introducing the elaborate

Inca administrative system as they went. Nowhere did they find another state capable of meeting them on equal terms, for by the time they came into conflict with the *Chimu* Kingdom on the north coast, the *Inca* were already too powerful for the *Chimu*. The


Ancas mayo
Manta
Quito
CHACHAPOYAS
CAJAMARCA
NORTH COAST
Lake Junin
Cuzco
SOUTH COAST
Lake Titicaca
CHARCAS
Tucuman
CHILE
Maule R.
PACHACUTI 1438-1463
PACHACUTI AND TOPA INCA 1463-1471
TOPA INCA 1471-1493
HUAYNA CAPAC 1493-1525

Map 4.—The expansion of the *Inca* Empire between 1438 and 1525. (Compiled by John H. Rowe.)

conquests were not easy, however, and many tribes put up a stubborn and effective resistance. Huarco, Chimu, Angaraes, Chinchaycocha, and Chachapoyas were provinces where the resistance was particularly stiff.

The *Inca* conquests started with a campaign in the lower Urubamba Valley and in Vilcapampa which Pachacuti undertook immediately after his victory over the *Chanca* (Cobo, 1890–95, bk. 12, ch. 12; Sarmiento, 1906, chs. 33–35). Having consolidated his power at home, he turned west through the *Quechua* and *Chanca* country, and conquered Soras and Vilcas. From Soras he sent General Capac Yupanqui to reconnoiter the south coast, and then occupied Aymaraes, Omasayos, Cotapampas, and Chilques. The exact order of the conquest of the other mountain provinces in this vicinity is not recorded, as some submitted without resistance, and the occupation of others was overshadowed by more important events. To avoid difficulties with his late enemies, the *Chanca*, Pachacuti persuaded them to undertake the subjugation of the *Colla*. (Cieza, 1880, bk. 2, chs. 47–48; Sarmiento, 1906, chs. 35, 37; Pachacuti, 1879, p. 273; Cabello, ms.)

General Capac Yupanqui was then entrusted with a large expedition to extend the *Inca* dominions on the north. He received strict orders not to go beyond a designated point, and was given a contingent of *Chanca* under a *Chanca* leader named Ancoallo to accompany the expedition. They conquered *Angará*, *Huanca*, and *Tarma*, and raided even farther north, well beyond the limit fixed by Pachacuti. The *Chanca* contingent got along very badly with the rest of the army, and deserted during the campaign, escaping to the eastern forests below Huánuco. Capac Yupanqui was executed on his return to Cuzco for disobeying orders and for letting the *Chanca* escape.[2]

Unrest in the Titicaca Basin then caused Pachacuti to undertake a campaign there in person. The reason for this campaign seems to have been a revolt of Ayaviri and some neighboring towns encouraged by the *Lupaca*, who were supposed to be allies of the *Inca*, but were probably worried by the new power which the *Inca* were acquiring. The revolt of Ayaviri was bloodily crushed, and Pachacuti went on to conquer the *Lupaca* and raid around the south and east shores of the lake. (Cieza, 1880, bk. 2, ch. 52; Cobo, 1890–95, bk. 12, ch. 13; Sarmiento, 1906, chs. 40, 41; Cabello, ms.)

Soon Pachacuti began to leave military affairs more and more to his son Topa Inca, and devote more of his own time to organization and to the elaborate program for rebuilding Cuzco which he had undertaken. While Topa Inca was occupied in other regions, however, Pachacuti undertook one more small expedition to the *Chumpivilca* and neighboring tribes, rounding out the highland part of the Empire on the southwest (Cieza, 1880, bk. 2, ch. 53).

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[2] Sarmiento, 1906, ch. 38; Cabello, ms.; Cieza, 1880, bk. 2, chs. 49, 50, 56; Polo, 1917 b, p. 115; Toledo, 1940, pp. 19, 24, 32, 40, 44. There are at least three divergent accounts of this campaign which are very difficult to reconcile. According to Sarmiento and Cabello, Capac Yupanqui was not supposed to pass a river near Huaylas, but he went on raiding to Cajamarca. Cieza says that he was supposed to stop at Huancas but went on to Chinchaycocha. Polo and Toledo's witnesses agree that he was not supposed to go beyond Vilcas but went to Huancas. The Indians seem to have been more interested in the dramatic value of the story than in geographical precision. For the chronology of *Inca* conquests, it does not matter which account is correct, as another expedition soon subjugated the whole area.

Topa Inca's first campaigns were in the north. He put in order the provinces conquered by his father and Capac Yupanqui, and marched up the Highlands as far as Quito. In the course of the fighting in Quito, Topa Inca pushed his way down to the Ecuadorean Coast in the neighborhood of Manta, and Sarmiento tells a very interesting story about a voyage of exploration which Topa Inca undertook in the Pacific. Then he invaded the Coast from the north, taking the *Chimu* king on the flank where he was least prepared, and occupied the whole *Chimu* Kingdom and the Central Coast valleys as far as Lurín. (Cieza, 1880, bk. 2, chs. 56–58; Cobo, 1890–95, bk. 12, chs. 13, 14; Pachacuti, 1879, pp. 281–84; Sarmiento, 1906, chs. 44–46; Cabello, ms., bk. 3, chs. 15–17.)

After his return to Cuzco, Topa Inca, in a new campaign on the South Coast, subdued the valleys from Nasca to Mala. The most serious resistance he encountered was at Huarco (Cieza, 1880, bk. 2, ch. 59). Pachacuti, now very old, resigned the Empire to Topa Inca about 1471 after a reign of 33 years. Topa Inca's first expedition after the installation ceremonies was an invasion of the eastern forests of the upper Madre de Dios, through Paucartambo and the country now occupied by the *Wachipeiri* and *Masco*. This campaign was interrupted by a great uprising in the Titicaca Basin touched off by a *Colla* who deserted from Topa Inca's army, and reported that the *Inca* had been heavily defeated by the forest Indians. Topa Inca turned back immediately to deal with this new danger. (Cieza, 1880, bk. 2, chs. 53–54; Cobo, 1890–95, bk. 12, ch. 14; Sarmiento, 1906, chs. 49–50; Cabello, ms., bk. 3, ch. 18.)

The Titicaca Basin revolt was led by the *Colla* and *Lupaca*, but the *Omasuyu* and *Pacasa*, who were not yet *Inca* subjects, participated. It was far from being a national movement of the *Aymara* tribes, for the *Cana* and *Chanchi* remained loyal, and the southern and western *Aymara* do not seem to have taken an active part. The *Inca* threat still seemed remote to the *Caranga* and *Charca*. Nevertheless, the revolt was a serious threat to the very existence of the *Inca* Empire, and Topa Inca took prompt and energetic measures against it. The rebels had fortified the peñón (butte) of Pucara, and a number of neighboring hills, and they put up a very stubborn resistance. Topa Inca finally took the forts, however, and occupied the whole *Colla* province. The *Lupaca* and *Pacasa* made another stand at the Desaguadero River, but were decisively beaten, and the rebellion collapsed. (Cieza, 1880, bk. 2, ch. 54–55; Sarmiento, 1906, ch. 50; Pachacuti, 1879, pp. 287–89; Cobo, 1890–95; Cabello, ms.)

Topa Inca next invaded modern Bolivia. Cobo says that the great conqueror had a vision of himself as master of the whole civilized (Andean) world, and vowed not to stop before reaching the uttermost sea (TIQSI-QOCA) 1890–95, bk. 12, ch. 14). He conquered the whole of Highland Bolivia, and invaded Chile through Lipes and Atacama. In Chile, he penetrated as far as the Maule River at the modern town of Constitución, where he set up the boundary markers of his Empire. The *Araucanians* who lived beyond were enemies too formidable to be successfully attacked at that distance from the *Inca* capital, and their wooded country was probably not attractive to the mountain Indians in any case. Tucumán and most of the Highlands of Northwest Argentina also submitted to Topa Inca. (Cieza, 1880, bk. 2, ch. 60; Sarmiento, 1906, ch. 50; Polo, 1917 b, p. 116; Cabello, ms.; Pachacuti, 1879, p. 292.)

Topa Inca made one more expedition to the eastern forests, and then devoted the rest of his reign to organization. It is not certain which aspects of the *Inca* administration were his father's ideas and which Topa Inca's, but Topa Inca had the job of applying *Inca* policies to the largest area ever united under one government in aboriginal America. He died about 1493 after a successful reign of 22 years, and was succeeded by his son Huayna Capac.

Huayna Capac continued his father's work of organization, put down a number of revolts, and widened the frontiers of the Empire in the north. He enlarged the *Inca* province of Chachapoyas and added Moyopampa. North of Quito, he defeated the *Cayambi* in bitter fighting, and set up his boundary markers on the Ancasmayo River, at the modern border between Ecuador and Colombia. He also conquered the hot Coast around the Gulf of Guayaquil and the large Island of Puná. During his reign, the *Chiriguano* attacked the Empire from the east (see Volume 3) and were beaten off but never subjugated. They brought with them Alejo García, an adventurous Spaniard from the coast of Brazil, who was the first European to visit the *Inca* Empire (Means, 1935, p. 41). The year that Huayna Capac died (1527) word was brought to him that Pizarro's preliminary exploring expedition had touched at Tumbez. (Cieza, 1880, bk. 2, chs. 62–68; Cobo, 1890–95, bk. 12, ch. 16; Sarmiento, 1906, chs. 58–62; Cabello, ms.; Polo, 1917 b, p. 114; Pachacuti, 1879, pp. 300–307.)

In the 5 years between Huayna Capac's death and Pizarro's invasion of the Empire, the *Inca* state was wracked by civil war. Huayna Capac died at Quito of a sudden pestilence without having announced his successor. Huascar, the obvious candidate, was at Cuzco, where he was crowned by the High Priest. Atahuallpa, another son of

Huayna Capac, assumed the governorship of Quito and, feeling ill-treated by Huascar, revolted. Huascar asserted that he was the legal heir and that Atahuallpa's position was entirely assumed. Atahuallpa's claims grew with success. He seems to have originally claimed only the governorship of Quito in Huascar's name, but later he asserted that Huayna Capac had divided the Empire and left him as independent sovereign of the northern part. The rivalry was decided by force of arms, with Atahuallpa completely victorious.

When hostilities opened, Huascar possessed the Empire north to the province of the *Cañari*, where he had a general named Atoc (Atoq, "fox") with a small force. Atahuallpa controlled only the northern half of modern Ecuador, but had most of Huayna Capac's seasoned army, which had remained at Quito, and the two best generals in the Empire, Quisquis and Challcuchima. The fighting was precipitated by the intrigues of the chief of the *Cañari*, and Atahuallpa ravaged that unhappy province to punish him for his double dealings.

It is a mistake to think of Atahuallpa's revolt as a national movement on the part of the *Quito* or of any combination of Ecuadorean tribes, although the natives undoubtedly hoped to profit from Atahuallpa's victory. The strength of Atahuallpa's cause lay in the *Inca* colonists of Quito and in the superb army which Huayna Capac's sudden death had left under his command. As the Empire had grown very large, and perhaps unwieldly, an argument could certainly have been made for dividing it, but Huayna Capac's reign of 34 years had shown that it was not impossible to administer such a wide territory from a single capital. The imperial succession had occasioned revolts before, and Atahuallpa's was not very different. As soon as he saw some prospect of success, he set out to make himself Emperor of the whole *Inca* territory and dropped all thought of a separate monarchy in Quito. If Pizarro had arrived a year later, he would have found Atahuallpa in full possession of all of Huayna Capac's power, Huascar's cause forgotten, and a political situation much less favorable to outside interference than he found in 1532.

The war was decided in a series of battles beginning near Quito and ending with a great encounter near the Apurimac River on the approaches to Cuzco from the north. Quisquis and Challcuchima were consistently victorious, and gathered strength as they went. In the final battle, Huascar was captured, and the two generals destroyed all the leaders of his party that they could find in Cuzco. The news of this victory reached Atahuallpa in Cajamarca about the same time that Pizarro did.[3]

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[3] Cieza, 1880, bk. 2; Sarmiento, 1906; Cabello, ms.; Pachacuti, 1879; Las Casas, 1892; Cobo, 1890–95; and Toledo, 1940, are some of the most important sources on the civil war. The bibliography on the subject is enormous, and full of contradictions. The later accounts should be checked by the chroniclers of the Conquest: Xérez, Estete, Anonymous Conqueror, and others. Sarmiento's account of the war appears to be based on a *Quechua* narrative poem, and is probably close to one of the Indian versions. Cabello's account is especially important, as he collected independent testimony in Quito and on the coast.

CULTURE

SUBSISTENCE ACTIVITIES

Agriculture.—The Andean area is one of the world's great centers of plant domestication, and, for many centuries before the Spanish Conquest, its inhabitants had lived chiefly by their agricultural labors. The Spaniards brought draft animals and new food plants, but introduced few changes in Indian methods of cultivation, so that modern Andean agriculture is much like that of the *Inca.* (See Mishkin, The Modern Quechua, pp. 411–470, and Tschopik, The Aymara, pp. 501–573 in this volume.)

A complete list of the plants cultivated in the Andes probably would exceed 40 species, most of them domesticated in the area, but it would be difficult to find a valley where they were all grown. The potentialities of the valleys varied according to altitude; over 12,000 feet (3,660 m.), only 6 or 8 species could be raised, but in the warm irrigated valleys of the coast as many as 20 different plants might be cultivated. In the highest valleys, the potato (PAPA) was the staple crop, and several varieties were cultivated. Quinoa (KINOWA) furnished the most important grain, and leaves which were boiled like spinach. Oca (OQA), ulluco (OLYOKO), and añu (ANYO) were common crops, and another grain, cañigua (KANYIWA), related to quinoa, could also be raised. At lower altitudes, the staple was maize (SARA), but the plants of the highest valleys were also cultivated. In addition, a grain (TARWI), molle (MOLYI), a tree producing red berries, one of the varieties of chili pepper (ROQOTO), and squash (SAPALYO) could be grown. The valley of Cuzco is a little too high for ROQOTO and squash, but all the other plants listed can be grown there.

The *Inca* imported a number of plant products from the lower and hotter valleys, especially chili pepper or ají (OCO), a sweet edible root (ACIRA), cotton (OTKO), gourds (PORO), and coca (KOKA). Peanuts, beans, lima beans, yuca (sweet manioc), tomatoes, avocados, sweet potatoes, and some 12 other plants were also important staples in the lower valleys, to name only the most important. Most of them have *Quechua* names.[4]

Andean valleys are characteristically deep and narrow, so that the amount of flat and irrigable bottom land is severely limited, and, in the rainy season, the run-off from the steep slopes is so great as to be a serious danger to the fields and settlements in the valley. The *Inca* solved both problems by terracing the sides of the valleys, sometimes so extensively that the whole valley for miles was reshaped and regraded, as at Yucay and Ollantaytambo. Early *Inca* terraces were small and irregular, and probably the work of individual family groups, but, in Late *Inca* times, the whole resources of the MIT'A labor service were turned to the problem, and the terraces were large and elaborate. Late *Inca* terraces are faced with dry-masonry walls, sometimes of cut stone, and are filled in behind with layers of stones, gravel, and earth to provide proper drainage (pl. 83, *top, right*). They are furnished with elaborate stone water channels to distribute irrigation water, and with jutting stones on the terrace faces which serve as stairs. (See Cook, 1916.)

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[4] The literature on Peruvian domestic plants is very extensive. See especially Yacovleff and Herrera, 1934–35; Cook, 1937; Mangelsdorf and Reeves, 1939; Herrera, 1923; and Sauer, Handbook, vol. 5.

The long dry season and the rapidity of surface run-off make irrigation necessary nearly everywhere in the Andes, although some quick-growing crops can be grown on the unirrigable slopes during the rainy season. Irrigation ditches were generally mere trenches dug into the hillsides and supported when necessary by a dry stone wall (Cobo, 1890–95, bk. 14, ch. 8), but, where irrigation was combined with terracing, carefully cut stone channels were built. The *Inca* Emperors constructed some very elaborate irrigation works, and brought water for many miles in nicely graded channels to some of their projects. The *Inca* government marked the boundaries of all fields with monuments, called SAYWA, probably piles of stones. As the whole system of taxation depended somewhat on the stability of these markers, it was considered a serious crime to move them. The first offense was punished with HIWAYA (p. 271), the second with death. (Cobo, 1890–95, bk. 12, ch. 26; González, 1608; Poma, 1936, p. 353.)

Farming implements were as elaborate as is desirable for a people who lack draft animals. The two most important ones were the foot-plow (TAKLYA) and the hoe (LAMPA or QORANA). The foot-plow consisted of a pole about 6 feet (1.8 m.) long with a point of hard wood or bronze, a footrest near the point, and a handle on the upper end, but it probably varied locally in the shape and dimensions. (See Poma, 1936, pp. 1147, 1153, and Means, 1931, figs. 222–23.) It was used with both hands and one foot, being lifted some 12 inches (30 cm.) above the ground and jabbed into the earth with the user's full force. It was essentially a man's tool, used for breaking up the ground, digging holes for planting, and harvesting potatoes. The hoe had a wide, chisel-shaped, bronze blade with a short haft usually made from a tree crotch, so that it resembled an old fashioned adze more than a modern hoe (Poma, 1936, pp. 250, 1134, 1147). It was used by both men and women for breaking up clods, weeding, and general cultivation. Of more limited use was the clod-breaker (WINI or WIPO), a doughnut-shaped stone with a long wooden handle used to break up earth loosened by plowing (González, 1608, pp. 201, 354; Poma, 1936, p. 1165). Poma illustrates a boat-shaped board used for scraping the earth over planted seeds and for general digging. (Poma, 1936, pp. 1156, 1162; see Descriptions in Cobo, 1890–95, bk. 14, ch. 8.)

The farmer's year in the Andes is divided into a dry season, April to November (winter), and a rainy season, December to March (summer). The *Inca* subdivided these seasons with descriptive names such as "growing time," "season of flowers," "time of heat," etc. The time for sowing was regulated by solar observation. (See Lore and Learning, Astronomy, pp. 327–327.)

Plowing began in August with an assembly to plow the fields assigned to government and religion. This occasioned a great festival (fig. 23, *a*). The plowmen formed a line across the field, each taxpayer in his assigned strip, and worked backward. Each man's wife faced him with a hoe to break the clods. The work was done in time to a chant (HAYLYI), which was also used to celebrate military victories. (Garcilaso, 1723, pt. 1, bk. 5, ch. 2; Poma, 1936, pp. 250–51; Cobo, 1890–95, bk. 14, ch. 8.) Chicha was provided the workers. After fulfilling their tax obligations, the householders tilled their own fields in the same way, helping each other according to the work exchange obligations (AYNI).

Early maize to be harvested in January was planted in August, but the bulk of the maize was sown in September (fig. 24, *a*). The farmer made a hole, and his wife threw in a handful of grains. Potatoes were planted similarly at the beginning of the rainy season. The priests of the Sun fasted from sowing time until the maize plants were a centimeter high, and, in Cuzco, a public ceremony was held with sacrifices of llamas, dances, and ceremonial drinking (fig. 25, *b*).

The most critical time of year was October and November, when the fields were driest and the rains had not started. If the rains were late, special ceremonies (fig. 24, *b*) were held to appeal to the sympathies of the Thunder God (ILYAP'A). Processions of people dressed in mourning and holding banners went through the streets wailing. Black llamas or dogs were tied to stakes in open places and left to cry from hunger until the Thunder God took pity on them and on the people and sent rain. Chicha was sprinkled around them.

During the rainy months, the chief agricultural work was weeding and driving away birds (fig. 24, *c*), deer, foxes, skunks, and other animals dangerous to the crops. A small hut was built beside the field for a caretaker if the crop was too far away to be watched from the house. The farmer went out by day to protect the crop with a fox skin over his head, a staff with rattles and tassels, and a sling; in such a costume, he was called "guardian of the fields" (ARARIWA). If necessary, a woman with a small drum watched at night. The chief danger from human thieves was in April, when the maize was ripe but not quite ready for harvest.

Men and women worked together to harvest the maize. The grain was removed from the ears and stored in the house. A public festival (AYMORAY) was celebrated with songs and dances as the grain

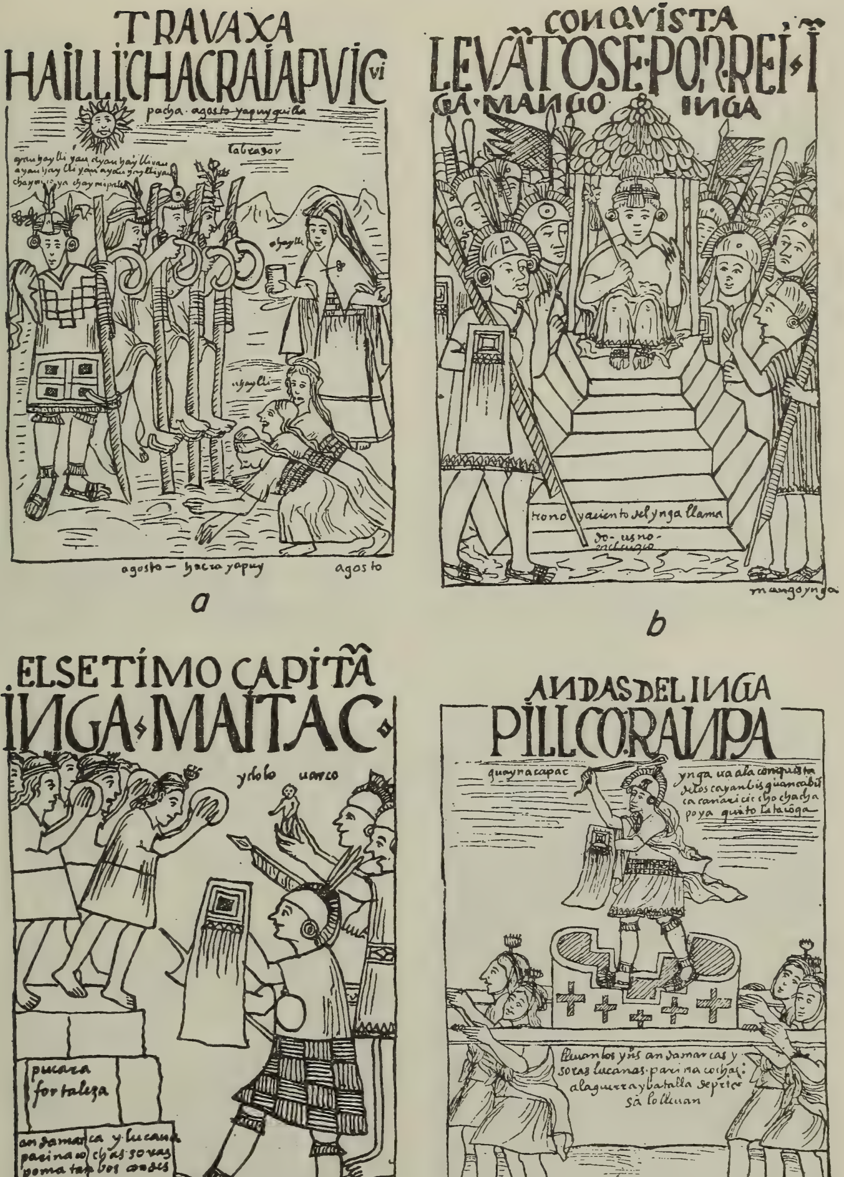
TRAVAXA
HAILLI CHACRAIAPVIC vi
pacha agosto yapuyquilla
labrador
ahaylli
agosto — hacra yapuy
agosto
a
CONQVISTA
LEVÃTOSE·POR·REI·ĨGA·MANGO INGA
trono y asiento del ynga llama
mangoynga
b
EL SETÍMO CAPITÃ
ĨNGA·MAITAC·
ydolo uanco
pucara fortaleza
andamarca y lucana
yunga
ynga
c
ANDAS DEL INGA
PILLCO RANPA
guaynacapac
batalla del ynga
d

Figure 23.—Scenes of *Inca* life. *a*, Plowing festival; *b*, the coronation of the Emperor, Inca Manco, showing *Inca* throne and insignia; *c*, attacking a fort with the *Inca* soldier carrying a "huaca" and the leader wearing a metal pendant, shield, and halberd; *d*, war litter of Huayna Capac (note sling). (After Guaman Poma. 1936, pp. 1153, 398, 155, 333.)

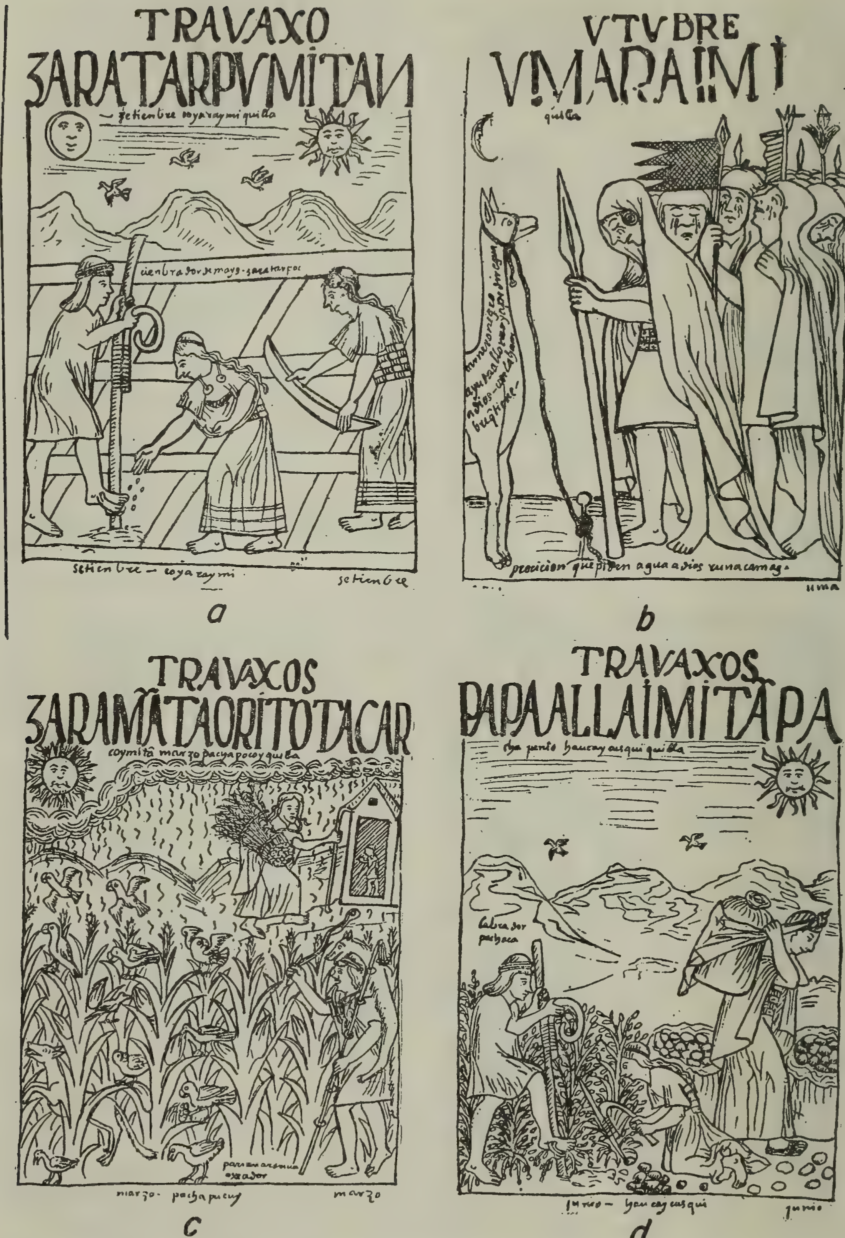
TRAVAXO
ZARATARPVMITAN
setienbre — coya raymi
setienbre
a
VTVBRE
VMARAIMI
precicion que piden agua a dios runacamag
b
TRAVAXOS
ZARAMATAORITOTACAR
marzo - pachapucuy
marzo
c
TRAVAXOS
PAPAALLAIMITAPA
junio - haucay cusqui
junio
d

FIGURE 24.—*Inca* agriculture. *a,* Planting maize; *b,* ceremony for rain; *c,* watching the maize crop; *d,* harvesting potatoes. (After Guaman Poma, 1936, pp. 1156, 254, 1138, 1147.)

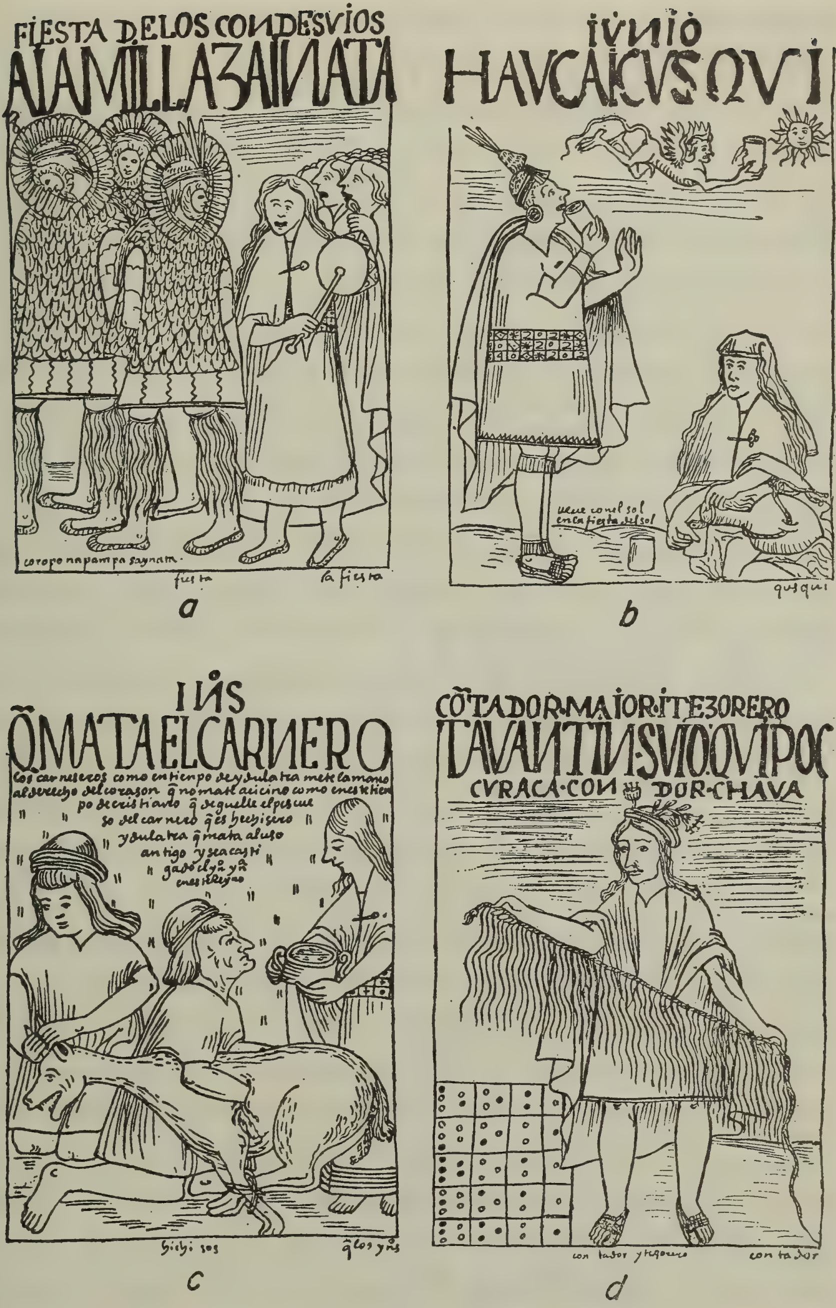
FIESTA DELOS CONDESVIOS
AIAMILLAZAINATA
coropo napampa saynata
fiesta
la fiesta
a
IVNIO
HAVCAICVSQVI
ueue conel sol
enla fiesta delsol
quisqui
b
IVNS
ỌMATAELCARNERO
Los carneseros como entienpo deydulatria mete lamano al derecho delcorazon q̃ nomate aicino como eneste tienpo de cristiano q̃ deguelle elpescueso del carnero q̃es hechisero ydulatria q̃mata aluso antigo y sea castigado
hichisos
q̃los yn̂s
c
CÕTADOR·MAIOR·ITEZORERO
TAVANTINSVIO.QVIPOC
CVRACA·CON DOR·CHAVA
con tador ytezorero
con tador
d

Figure 25.—Scenes of *Inca* life. *a*, Masked dancers of the Contisuyo; *b*, ceremonial drinking; *c*, man slaughtering a llama in the ancient fashion, tearing out the heart while an attendant stands ready with ceremonial bowl to receive it; *d*, *Inca* accountant with abacus and quipu. (After Guaman Poma, 1936, pp. 326, 246, 880, 360.)

was brought in. The most unusual ears of maize (called SARA-MAMA, "maize mother") were put in a miniature storage bin made of corn stalks. The bin was watched for 3 nights, and then the farmer sacrificed to it, and a diviner determined whether the bin had "strength" enough to last another year. If it did not, it was ceremonially burned and a new one made. Potatoes were harvested in June (fig. 24, *d*). (Cobo, 1890–95, bk. 14, ch. 8; Poma, 1936, pp. 1131–1167; Molina of Cuzco, 1913, pp. 131–75; Molina of Santiago, 1916, pp. 160–62; Garcilaso, 1723, pt. 1, bk. 5, ch. 2; Polo, 1916 a, pp. 20–21.)

Little is said by the chroniclers about crop rotation. Fertilizer was used all through the Andean area, although the source varied. In the high country where llamas were bred, llama dung was the favorite. In the lower mountain valleys, human manure was about the only fertilizer obtainable. The Coastal peoples used bird guano from the Guano Islands or the heads of small fish (Garcilaso, 1723, pt. 1, bk. 5, ch. 3; Molina of Santiago, 1916, p. 127).

The Indians had such a passion for agriculture that they would leave more profitable activities at planting and harvest time to go off and tend their fields. This attitude had a serious effect on *Inca* history, notably in hastening the collapse of the Siege of Cuzco in 1537 (Cobo, 1890–95, bk. 14, ch. 8).

Gathering wild foods.—The gathering of wild plants, minerals, eggs, and insects was comparatively unimportant in *Inca* economy. Foods collected included fruits of two kinds of tuna cactus and of a bush called AWAYMANTO, which were considered delicacies. The leaves of the HAT'AQO and PISQOQ CAKIÑ ("bird's foot") were eaten raw or cooked, and the leaves of another plant (OQA-OQA) were chewed for thirst. All wild plants of which the leaves were boiled and eaten were called generically YOYO, and there were several kinds besides those mentioned (RGI, 1881–97, 2: 208, 214). Infusions were made from the leaves of a few wild plants, mostly for medicine.

The most useful nonfood plant was the Andean bunch grass (ICHU), which was gathered on the hillsides for thatch roofs, brooms, and braided rope as well as for certain ceremonial uses. The fibers of the Andean century plant (ACOPA) were used for cordage. Many wild plants were collected for dyes, medicines, poisons, or charms.

Fuel was a serious problem in most valleys because of the scarcity of trees. Bushes and scrub from the hillsides were burned, and dried llama dung was a supplementary fuel. Dried llama dung burns like coal with little smoke or odor. Under the *Inca*, wood-cutting areas were strictly controlled to prevent stripping. Wood for roof timbers was imported from the tropical valleys when possible, or improvised from the twisted branches of the QISWAR tree (RGI, 1881–97, 2: 213, etc.). Short sections of various other mountain trees could be utilized for tools, carved objects, and construction.

Tinamov and dove eggs were used in witchcraft, but were not important as food. One insect was eaten in the larval stage (WAYT'AMPO). It is found under the bark of the chachacomo tree, and was roasted as a delicacy (Yacovleff and Herrera, 1934–35, p. 36).

Salt is abundant in the neighborhood of Cuzco, and was recovered by evaporation from saline rivers. A number of edible clays were collected and traded rather widely in the southern Highlands.[5]

Hunting.—Hunting was of minor importance. In *Inca* times, it was strictly regulated. Two kinds of deer (LOYCO and TAROKA) and the guanaco were taken for their meat. The viscacha, a large rodent, provided meat and hair, which was mixed with other fibers in textiles (Garcilaso, 1723, pt. 1, bk. 8, ch. 17). Vicuñas were always taken alive and shorn, as they were more valuable for their fine fleece than as meat. Foxes (ATOQ), pumas, and bears were killed as nusiances. Birds were taken chiefly for their feathers, and were used in the war sacrifice. (See Warfare, p. 280.)

The chief hunting weapons were slings (WARAK'A), small bolas (RIWI or AYLYO; Poma, 1936, p. 205) (fig. 26, *b*), a rectangular net on two poles (fig. 26, *a*), used for catching birds (Poma, 1936, p. 204; Garcilaso, 1723, pt. 1, bk. 8, ch. 13), snares and nooses (González, 1608, under *ppita and *toklla; Poma, 1936, p. 207), and clubs, which were used in killing animals brought to bay by the surround. Dogs were not used for hunting (Cobo, 1890–95, bk. 14, ch. 16).

Under the *Inca* Empire, all game was preserved, and the wild country where hunting was good was closed to the Emperor's subjects except on special occasions. Periodically, the Emperor or his governor staged a great public hunt (CAKO) to thin out the game in the preserve, make sport for the nobility, amuse the people, and increase the meat supply. One of the last imperial hunts was held by Manco Inca near the valley of Jauja in Francisco Pizarro's honor, before 1536, and the numerous descriptions of the hunt found in the chroniclers are probably based on what the Spaniards saw on that occasion. Some 10,000 Indians formed a ring around a space some 30 to 60 miles (50 to 100 km.) in circumference, with a space between the beaters. They closed toward the center, forming several concentric rings as their circle grew smaller, and drove all the animals in the area before them. When the circle was small enough, designated hunters entered it and killed as many animals as was desired; in this case over 11,000. The rest were set free. The meat taken was sun-dried to preserve it. (Cobo, 1890–95, bk. 14, ch. 16; Cieza, 1880, bk. 2, ch. 16; Garcilaso, 1723, pt. 1, bk. 6, ch. 6.) Another technique (*caycu) was used to surround vicuñas and guanacos: fences were so built that the animals could be driven into a narrow gorge (Cobo, 1890–95, bk. 14, ch. 16).

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[5] Except as otherwise indicated, this section is a reconstruction based on present practices, the pre-Columbian antiquity of which is almost certain, in spite of the silence of the chroniclers. The modern customs were recorded by me from informants in Cuzco in August and September 1943.

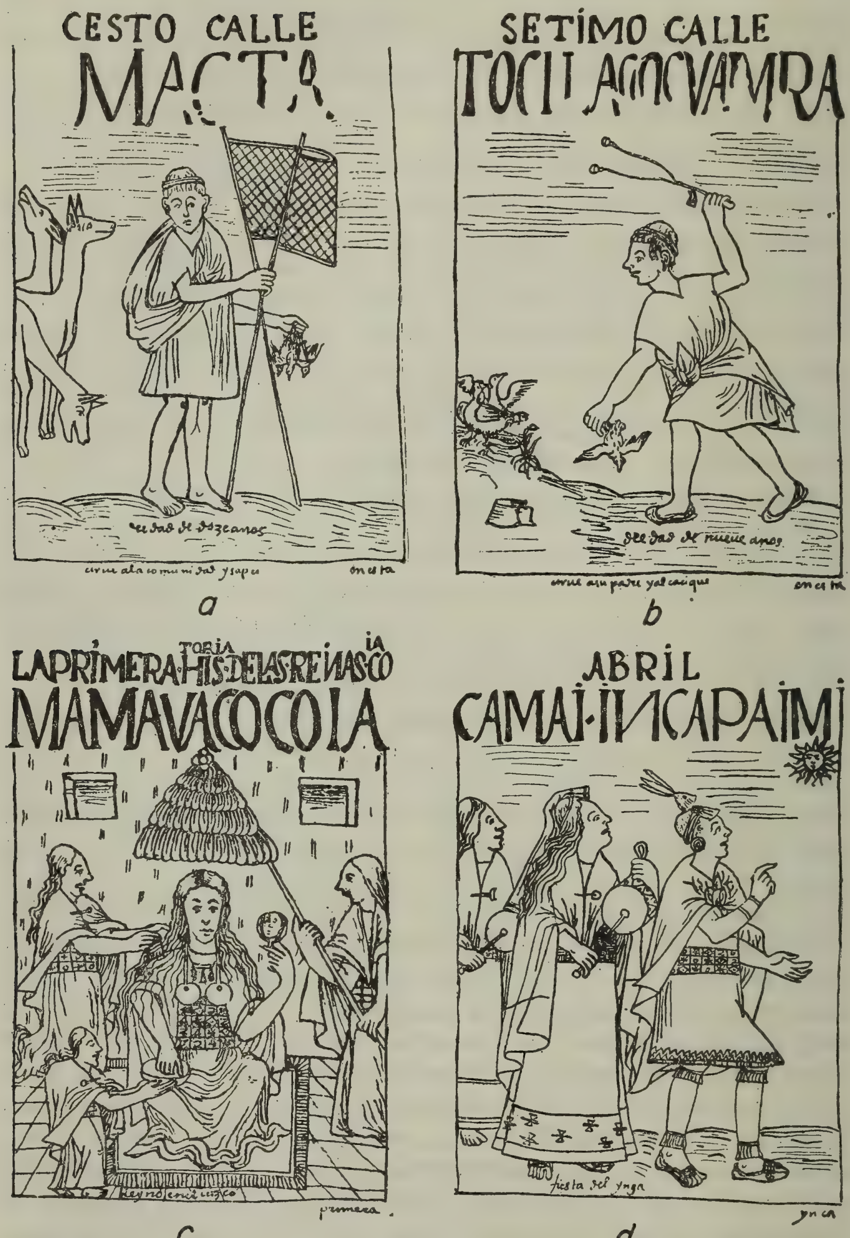
CESTO CALLE
MACTA
edad de dozeanos
sirve ala comunidad ysapu
en esta
a
SETIMO CALLE
TOCLLACOCVAMRA
de edad de nueue anos
sirve asu padre yal casique
en esta
b
LA PRIMERA HISTORIA DE LAS REINAS COIA
MAMAVACOCOIA
primera
c
ABRIL
CAMAI INCAPAIMI
fiesta del ynga
ynca
d

FIGURE 26.—*Inca* boys hunting birds and *Inca* dress. *a*, *b*, Boy hunting with bird net and with bolas; *c*, care of the hair and use of bronze mirror; *d*, most elaborate form of *Inca* dress. (After Guaman Poma, 1936, pp. 204, 206, 120, 242.)

Domesticated animals.—The *Inca* possessed the greatest variety of domesticated animals of any people in ancient America. They raised llamas (LYAMA), alpacas (PAQO), dogs (ALQO), guinea pigs (QOWI), and ducks (NYONYOMA) and depended heavily on them for food, clothing, transportation, and sacrifice.

The raising and use of llamas and alpacas among the modern *Aymara* are described by Tschopik in this volume (p. 521). The chroniclers give a few particulars, which confirm the antiquity of modern practices. Llamas were raised for their wool, used in coarse clothing, for their flesh, and for packing light loads, but alpacas were raised only for their wool, which is finer and better than that of the llama. Alpacas were shorn frequently, but llamas only when they died or were killed. Llamas were used in very large pack trains in ancient times, and the Indians calculated that eight drivers were needed for every 100 animals. The llamas were considered useful pack animals from 3 to 10 or 12 years old. They will travel only 3 to 4 leagues (15 to 20 km.) a day on a long journey, but over short distances they can keep up with a mule. They were not often ridden in ancient times, as they tire quickly under the weight of a man (Cobo, 1890–93, bk. 9, ch. 57). Under the *Inca* Empire most llamas and alpacas were owned by the government. (See Political Organization, p. 267.).

The *Inca* dog was of medium size with a pointed face, short legs, thick body, a long tail curling tightly over the back, and generally short hair (Poma, 1936, p. 225; amulets in University Museum, Cuzco). Its descendants are still numerous in Cuzco. The *Inca* kept dogs only as pets and scavengers, and used them rarely in religious ceremonies (see Religion, pp. 305–308), but the *Huanca* of Jauja sacrificed dogs instead of llamas, and ate the sacrificed meat. The *Inca* had much the same prejudice we have against dog meat, and contemptuously called the *Huanca* ALQO-MIKHOQ, "dog-eaters" (Poma, 1936, p. 267).

Almost the only regular meat supply available to the Indians was provided by the swarms of guinea pigs that bred in Indian kitchens; the situation has not changed much in the last 400 years. The guinea pigs eat food scraps, and the Indians feed them green plants to fatten them. They are inoffensive and cleanly, and are almost as valuable as scavengers as they are for their meat. The flesh is tender with a pleasant flavor and there is a lot of fat along the backbone (Cobo, 1890–95, bk. 9, ch. 46).

The domesticated duck was a large variety about which little is known except that it was used for food (Garcilaso, 1723, pt. 1, bk. 8, ch. 19).

Fishing.—In the neighborhood of Cuzco, lakes are few and small and rivers are shallow and swift, so that fish are neither very numerous nor very large. Consequently, fishing was less important than among the *Aymara* of Lake Titicaca, and it was largely ignored by the chroniclers of Cuzco. Modern fishing practices are probably so similar to the ancient ones, however, that a few remarks on present-day fishing may be of interest.

The rivers around Cuzco support three or four kinds of small fish, all under a foot (0.3 m.) long. The largest (WITA) is taken with a thorn-pronged fish spear, with a large dip net improvised of a coarse clothlike burlap (called bayeta), or with the bare hands. In the Lake of Piuray, small fish are taken in a great bayeta net, some 65 by 130 feet (20 by 40 m.). It is placed on the bottom by swimmers and then drawn in. At Izcuchaca, on the Plain of Anta, fish in the small streams are taken by damming the stream so as to strand the fish below the dam.

Cobo mentions copper fishhooks, and describes a two-man net of cotton used on the Coast for small fish. It was drawn up between two balsas. The Coast fishermen also made low weirs along the beaches; fish which came in at high tide were caught as the tide went out. The use of barbasco, a vegetable fish drug of the eastern forests, is also noted, but without specific geographical location (Cobo, 1890–95, bk. 14, ch. 16).

Food preparation.—In ancient times, cooking meant boiling or roasting, as the Indians had no suitable utensils for frying. The most common dishes were soups and stews, flavored with chili pepper and herbs. Cobo lists several dishes of this kind: maize cooked with herbs and chili pepper until the maize splits open (*motepatasca); a stew of meat or fish, potatoes, chuñu, vegetables, and chili pepper (*locro); and a soup thickened with quinoa (*pisqui). Maize-flour dumplings were made also. The *Inca* made a kind of maize bread in small cakes, which may have been steamed or baked in the ashes. Maize toasted in open dishes was a ration for journeys. Popcorn was considered to be a great delicacy (Cobo, 1890–95, bk. 14, ch. 5).

The Indians ate twice a day, at 8 or 9 in the morning and at 4 or 5 in the afternoon. The dishes of food were laid out on the ground or on a cloth, and the eaters sat on the ground. The women sat back to back with the men, facing the cooking pots from which they served their husbands. At public banquets, the sections sat in two long lines in the town square or in the governor's courtyard, with the governor seated at the head on his stool. Each family brought its own food. A standard form was followed in drinking toasts: a man got up and took two cups of chicha over to the man he wished to toast, gave him one cup, and the two drank together (Cobo, 1890–95, bk. 14, ch. 5.)

To dry meat for preservation, it was cut into thin slices, exposed to the sun and frost, and pounded between two stones to make it thinner. Dried meat was called *charqui, whence our name "jerked" beef. Fish were also dried. Potatoes and ocas were preserved by a similar process. (See The Aymara, p. 527.) Dried potatoes were called *chuño, and dried ocas also had a special name (Cobo, 1890–95, bk. 14, ch. 5.)

Food was stored in large jars in the house or in special bins and granaries. A bin (PIRWA) made of cornstalks plastered with mud was apparently inside the house; the adobe granary (QOLQA) was probably outdoors. The attics of thatched roof houses (TAQI) were also used for storage, and pits were dug in the floor and plastered with mud for the same purpose (Cobo, 1890–95, bk. 14, ch. 4; González, 1608, p. 285).

The *Inca* used a special type of mill which is still in general use in the Andean area. (See The Aymara, p. 527.) It consists of a flat stone base and a rocker, which is a flat slab some 1½ inches (4 cm.) thick with a straight top sometimes provided at the corners with small ears for hand grips, and curved lower edge. It varies from 1 to 2½ feet (30 to 80 cm.) in length and 8 inches to 1⅓ feet (20 to 40 cm.) in height. The housewife kneels in front of the base, which is level and usually about 8 inches (20 cm.) above the ground, pours grain on the stone, and rocks the upper stone from side to side over it. The weight of the rocker obviates the need of pressure, and operation of the mill is so simple that most Indian households leave grinding to the girls 8 or 10 years old. In terms of the human effort involved in its use, the Andean mill is far superior to the Mexican metate. (Cobo, 1890–95, bk. 14, ch. 4; Garcilaso, 1723, pt. 1, bk. 8, ch. 9; Bingham, 1930, fig. 193.) In modern times, a type of metate is also used occasionally. A long mano or upper stone, square in cross section, is pushed and pulled up and down a slab of stone tilted away from the user (reported for Pucara in Puno by Julian Huaraccallo). It is not known whether this was used in ancient times.

Mortars, for grinding spices or condiments, were usually water-worn stones with one side hollowed out; the pestles were elongated pebbles with one end shaped to fit the mortar. (Cobo, 1890–95, bk. 14, ch. 4; Bingham, 1930, figs. 186, 188, 189, 192, 194–96.)

Cooking utensils were confined to a few simple shapes of pottery. *Inca* cooking pots usually had covers and pedestal or tripod bases, so that a fire could be built around them. Large cooking jars usually had pointed bases. The Indians ate from flat plates and drank from tumbler-shaped cups of wood (QIRO), pottery, or metal. The nobles used gold or silver dishes made in the same shapes as the pottery ones.

For the manufacture of chicha, see page 292.

HOUSES AND ARCHITECTURE

Domestic architecture.—Ordinary *Inca* houses seem to have been quite similar to those used by the modern *Quechua* and *Aymara*, but study of *Inca* domestic architecture has been rather neglected in favor of the more impressive public buildings, so that construction details are little known.

The majority of the houses around Cuzco were built either of field stones laid in mud or of adobe, and were rectangular in plan, with a gabled or hip roof of thatch on a framework of poles. Cobo describes the construction of such houses. The walls, about the height of a man, were thin and weak. The roof was supported by a framework of branches and cane, and thatched with ICHU grass (Cobo, 1890–95, bk. 14, ch. 3). Houses of this type are abundant at Machu Picchu, where the special conditions of the site impose certain peculiarities. Machu Picchu (pls. 81, 82) was evidently planned and built as a unit, probably by MIT'A labor working under professional architects, so that the walls were stouter and better built than in most Highland houses. Moreover, stone is abundant at Machu Picchu, while good clay is not, so that more care was taken to fit the stones tightly. As thatch has to be very steeply pitched in order to keep out driving rain, the Machu Picchu houses have much higher gables than buildings in the drier Cuzco region (Bingham, 1913, pp. 438, 452, 468, 478, etc.). These Machu Picchu houses and better-class houses all over the Highlands in ancient times were almost certainly entirely plastered with fine mud which concealed the wall construction. Traces of plaster remain in many *Inca* ruins: Chachabamba, near Machu Picchu; Ollantaytambo; the Amarucancha at Cuzco; and the Temple of Viracocha at Cacha, where fine masonry was partly covered. Remains of common houses are abundant near Cuzco, but are easily overlooked. A few were partially excavated in Sacsahuaman in 1934, but were not entered on the plan; others can be seen at Muyucocha and Catacasallacta. (See Rowe, 1944.)

Adobe houses are so often mentioned for *Inca* Cuzco that a large proportion of the houses must have been built wholly or partially of that material (Sancho, 1917, ch. 17; Morúa, 1922–25, bk. 4, ch. 2). Adobe ruins are still fairly common in the Cuzco region, but, easily damaged by the rains, few remain in good condition. As most of the surviving adobe buildings are the more solidly built government constructions, *Inca* use of adobe will be discussed below with other forms of public architecture.

Although rectangular houses were typical of the Cuzco region, round houses are found in late archeological sites in *Quechua* territory in the Department of Apurimac (reported by Oscar Núñez del Prado), and are mentioned for the *Huanca* (RGI, 1881–97, 1:89). Cobo describes round houses he saw in *Aymara* territory (1890–95, bk. 14, ch. 3), where they are still built. A round building, not a private house, is illustrated by Squier from the Cuzco area. It stands on the Hacienda Urco, near Calca, and apparently forms part of an ancient shrine (Squier, 1877, pp. 517–519). Garcilaso mentions a round "tower" in the Great Square at Cuzco (1723, pt. 1, bk. 7, ch. 10), and one of the structures inside the Fortress of Sacsahuaman has a circular plan.

Inca houses were usually built in groups, each group surrounded by a wall with only one entrance. The enclosures are usually rectangular were the topography permits, but were carefully accommodated to the available space in hillside settlements like Machu Picchu or Sayaq Marka (Bingham, 1930; Fejos, 1944). The ideal plan is probably that of the *Inca* village at Ollantaytambo (Squier, 1877, p. 504). Up to six rectangular houses were arranged around the sides of the enclosure facing an open court in the center; the corners were often utilized for storage or cooking, and probably were roofed in some cases (Phuyupata Marka, for instance; see Fejos, 1944). This type of house enclosure or compound (KANCA) was probably inhabited by an extended family. (See Social Organization, p. 249, and, The Aymara, p. 543.) The individual houses were called WASI.

The enclosure walls of *Inca* house compounds were often of field stone or adobe, but in the valley bottoms the most common wall and fence material is sod blocks. The sod is cut into square blocks, perhaps 16 inches (40 cm.) across, and laid in rows with the roots up. It weathers in such a way as to resemble stone blocks from a little distance. The use of sod in walls is certainly ancient.

In addition to permanent houses, the *Inca* built small pole and grass shelters, especially as guard houses in the fields. Such small huts, still built by the *Quechua*, are supported by a steep tripod frame of poles; they are very carelessly constructed. Tents were used by the *Inca* armies, but we have no details as to their appearance. The *Inca* may have learned their use from the Indians of the Coast. (Xérez, 1917, p. 53; Anonymous Conqueror, 1929, f. 3; González, 1608, under *carppa.)

Highland houses generally had one low doorway, which was closed only by a drape held in place with a stone when the owner was absent. Windows were rare and small, and no chimneys or smoke holes were provided, so that house interiors were dark and smoky. As the Indians spent most of their waking hours outdoors, however, they had little interest in making their houses more comfortable (Cobo, 1890–95, bk. 14, ch. 3).

Household furniture.—Furniture was likewise scanty. The stove was a low clay affair, with two or three holes in the top where the pots could be set, and a small stoking hole in the front. To economize firewood, which was scarce and difficult to collect, a very small fire was used, and the pots were crowded together. Kitchen utensils consisted of a variety of clay pots, dishes, and pitchers, a copper or bronze semilunar knife (TOMI), wooden ladles, and bone skewers. Food and spare clothing were stored in large jars, and there were usually a few irregular niches in the walls to do duty for shelves (Cobo, 1890–95, bk. 14, ch. 4).

Many Indians slept on the dirt floor in a long blanket folded at the feet so that half was under the sleeper, half over him. The whole family usually shared one bed. Nobles put a layer of straw or matting under the blanket for greater comfort. Everyone slept in his clothes (Cobo, 1890–95, bk. 14, ch. 4). In some districts, modern Indian houses have a raised platform (PONYONA-PATA, "sleeping platform") at one end where the family sleeps. A few houses at Machu Picchu have a dividing line of stones which may have supported a platform bed. Another modern *Quechua* type of bed is a pole frame on legs (KAWITO). Although it would be natural to suspect that this was copied from the Spaniards, the name is listed by González in 1608 with its present meaning; if burrowing took place, it must have been very early. This type of bed appears to be aboriginal. All three types are at present used in different houses in the village of Yucay near Cuzco (information from Gabriel Escobar).

A few houses had stone or adobe benches along one wall, though the Indians generally squatted on their haunches, pulling their tunics down over their bent knees so that the cloth helped to hold their legs in place. The only kind of chair (TIYANA, "seat") was restricted to high officials to whom the privilege had been granted by the Emperor. Cobo describes it as a low seat, about two palms long and one palm high, with a slightly concave top. It was carved out of a single piece of wood, in the shape of an animal with short legs, lowered head, and raised tail. (Cobo 1890–95, bk. 14, ch. 4; Estete, 1924, p. 27; Morúa, 1922–25, bk. 1, ch. 17.)[6]

Public architecture.—All the best-known monuments of *Inca* architecture were constructed not by individual owners but by the government, according to careful plans and with labor provided by the MIT'A. The architects and master masons were professionals, exempt from ordinary taxation, and occupied full time on public works. They were government officials, supported out of government revenues (Cobo, 1890–95, bk. 14, ch. 12; Poma, 1936, pp. 352–357). Lacking paper, the *Inca* relied on clay models for designing buildings and laying out roads, terraces, waterworks, and towns (Garcilaso, 1723, pt. 1, bk. 2, ch. 16; Betanzos, 1880, ch. 16). A number of models of buildings and relief plans in stone have been preserved, and give a fair idea of the aids with which *Inca* architects worked (Pardo, 1936).

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[6] The Spaniards borrowed the West Indian word duho to designate this type of seat. A number of chroniclers, including Cobo, unaware of the origin of the word, attributed it to *Quechua*.

We know nothing about the instruments used for measurement, but it is reasonable to suppose that the *Inca* used a sliding rule more often than a fixed one with arbitrary units of measurement. The sliding rule consists of two sticks which are slid along one another until their combined lengths exactly cover the space to be measured. Father Cobo to the contrary, the *Inca* knew and used the plumb-bob, for which there is a *Quechua* name (WIPAYCI) in González's dictionary of 1608. Two specimens are illustrated by Bingham (1930, fig. 178), and I picked up a small stone one in the ruins at Ollantaytambo.[7]

The tools used were few and simple. Bronze and wooden crowbars and levers were used for moving stone; the former are numerous in archeological collections. (A specimen from Machu Picchu was illustrated by Bingham, 1915 b, p. 182, No. 3.) Bronze chisels of several different shapes have also been found, and were probably used for drilling holes in stone and for woodworking (University Museum, Cuzco; and see Mead, 1915, fig. 3, *e*). Stone and bronze axes were probably used chiefly as weapons, but could have served also for woodworking. (See Bingham, 1915 b, p. 183.)[8]

Stones were generally worked with stone hammers, preferably of hematite or other heavy ores (Cobo, 1890–95, bk. 14, ch. 12; specimens). The hammer marks can still be seen on the Yucay limestone blocks of which the fortifications at Sacsahuaman are built. The process of working stones with stone hammers is not as slow and laborious as many people who have never tried it are inclined to believe. Sand and water were probably used for polishing when a smooth surface was desired.

The best-known *Inca* buildings were constructed wholly or partly of stone (Sancho, 1917 b, ch. 17), and all stone buildings between Pucara in Puno and Ayacucho, of which any illustrations have so far been published (with the exception of constructions at Chanapata and possibly also at Pikillacta and Huata) are of Late *Inca* style. These include Machu Picchu, Sacsahuaman, Ollantaytambo, and all remains in the city of Cuzco proper. It is necessary to stress this point because there is a widespread belief that some or all of these ruins are "pre-*Inca*." (See Rowe, 1944.)

Late *Inca* stonework shows considerable variation in the size and shape of the blocks and the regularity with which they were laid up (pl. 83, *top*, *left*). A number of attempts to make chronological deductions from such differences have been made. (Cf. Jijón y Caamaño, 1934.) The whole city of Cuzco was rebuilt by Pachacuti some time after 1440, and there is good reason to suppose that the existing ruins all represent the styles of the next 90 years, so that the differences in ages of the buildings in Cuzco are probably not very great. (See Rowe, 1944.) Differences in construction, however, show high correlations with the kind of stone and the purpose of the wall. Three kinds of stone were used in Cuzco: (1) Yucay limestone, a hard gray stone always cut into polygonal blocks by the *Inca* masons. It was used for the great fortifications of Sacsahuaman, but elsewhere chiefly for foundations or the less important parts of enclosure walls and terraces. (2) Sacsahuaman diorite porphyry, a green stone used in large polygonal blocks for enclosure walls where unusual solidity was desired (Hatunrumiyoc, where the outer enclosure is also a retaining wall) and the famous corners of Ahuacpinta and Cabracancha, where only the corner is diorite. (3) A black andesite, which weathers to a chocolate-brown color. The nearest outcrops of this stone are at Huaccoto, some 9 miles (15 km.) from Cuzco, and at Rumicolca, about 21 miles (35 km.) away. It was usually cut into rectangular blocks, sometimes set in regular courses, and sometimes laid up irregularly, and was used for the finest *Inca* construction (the Temple of the Sun and most *Inca* palaces).[9]

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[7] A serviceable level can be made by hanging a plumb-bob from the apex of an equilateral triangle and marking the center of the hypotenuse, but the *Inca* use of such an instrument has not been reported.

[8] At Ollantaytambo, there is a block of stone with an unfinished saw-cut on one side, which poses an interesing problem. The Indians knew a reed called SIQ-SIQ, "yerba cortadera," which deposits silica on its leaves and can be used to saw wood, but I do not know whether it could be used to cut stone, even by making only a few strokes with each leaf (part credit to Harry Tschopik, Jr.).

Stones too big to be carried were moved on rollers with the aid of wooden pry bars and large crews of men pulling with ropes.[10] The blocks were raised into position by building a ramp of earth and stones up to the height of the wall and running the blocks up on their rollers. Cobo saw this technique used by Indian workmen employed on the construction of the Cuzco cathedral (1890–95, bk. 14, ch. 12), and a half-finished chullpa at Sillustani in Puno has such a ramp still in place. Although built in *Aymara* territory, the style of the masonry of the chullpa is *Inca*. Protuberances were often left on the blocks of stone to provide a purchase for the pry bars, and, in many walls, the protuberances were never removed. They were probably considered decorative, as similar ones were in Greece in the 4th century B. C. The protuberances are usually near the bases of the blocks. (See, for instance, Bingham, 1913, p. 530.) Many stones at Sacsahuaman have indentations instead of protuberances at the base, no doubt for the same purpose. (See Bingham, 1916, p. 436.)

One of the most striking characteristics of *Inca* masonry is that the edges of the blocks are bevelled back so that the joints are emphasized, as in rusticated construction (pl. 83, *top, left*). It has no structural purpose and is purely decorative convention, the effect being to break up the surfaces of the walls into patterns of light and shade. The depth of the bevel at the cracks is roughly proportionate to the size of the blocks of stone. The joints themselves are often so tight and true that it would be difficult to insert even a pin into the crack. No mortar was used, and the edges of the blocks touch at the wall face; in the interior of the wall, however, the stones are seldom perfectly fitted, and the cracks are filled with mud. (Cf. Cobo, 1890–95, bk. 14, ch. 12.)

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[9] See Gregory, 1916. Garcilaso's statement that stone for the fortress of Sacsahuaman was brought a long distance should be taken to refer to the andesite blocks used for buildings within the fortifications. The great limestone blocks were cut in situ or very nearby (Garcilaso, 1723, pt. 1, bk. 7, ch. 27).

[10] Sr. Luís Llanos informs me that a treasure hunter at Ollantaytambo dug under a large *Inca* block abandoned between the quarry and the site and found remains of wooden rollers.

A very large proportion of the public buildings in and near Cuzco were built wholly or partly of adobe. The Amarucancha, behind the Jesuit church in Cuzco, has an *Inca* stone wall about 6 feet (2 m.) high. About 10 years ago, when an adobe wall on top of the stone was torn down, a few courses of *Inca* adobes were found in place on top of the highest course of stones. Some of the adobes are preserved in the University Museum at Cuzco; they are roughly square in cross section, perhaps 8 inches (20 cm.) across, and very long, perhaps 32 inches (80 cm.). The proportion of straw to mud is very high. The great median wall of the Temple of Viracocha at Cacha is built of adobe on a stone foundation (Bingham, 1916, p. 450; Means, 1931, fig. 170). So is the most elaborate adobe ruin in the Highlands, the "House of the Inca" at Yucay, and various storehouses in the valleys of Cuzco and Chita. About half of the buildings at Pisac are either wholly or partly of adobe. Adobes in a number of these sites vary greatly in size even in the same wall, suggesting hand rather than mold construction. Usually they are flatter and shorter than the ones from Amarucancha.

Doors and niches in *Inca* adobe buildings usually had lintels made by wrapping two or three wooden poles with grass rope, so that they could be plastered over. Corners were usually strengthened by sticks running across the inside corners of the building. The walls originally were covered by a uniform coat of mud plaster which might be painted.

Roofs were made of thatch, but might be extremely elaborate. The frame of poles might be covered with straw or reed mats, woven into patterns, and the bundles of straw tied onto the mats as thatching were laid in rows like shingles with their edges carefully trimmed. Cobo mentions having seen *Inca* roofs about 3 feet (1 m.) thick (1890–95, bk. 14, ch. 3), and Markham and Squier describe one in Azángaro which was still standing after more than 300 years (Markham, 1862, pp. 193–194; Squier, 1877, pp. 392–395).

The *Inca* built a great variety of palaces, temples, storehouses, forts, baths, agricultural terraces, and tombs, some with plans derived from the compound of domestic architecture, and others adapted to particular uses. The reader interested in the plans of *Inca* buildings should consult Bandelier (1910); Squier (1877); Rowe (1944); Fejos, (1944); and the various reports of the Bingham Expedition.

Late *Inca* buildings have certain striking characteristics. Sunken joints, protuberances, battered walls, trapezoidal niches and doors, regular rows of niches, projecting stone pegs on the outside of the gables or inside over the niches are typical of Late *Inca* work.[11]

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[11] At Yucay, in 1943, a ruin with Late *Inca* architectural traits was found by the University of Cuzco expedition to contain Cuzco polychrome (Late *Inca*) sherds in the mud between the stones.

Although most *Inca* buildings consisted of a single lower story with storage space under the roof, two-story buildings are not uncommon (Ollantaytambo; Wiñay Wayna), and three-story buildings are known (Cacha). These have one story directly over another, and are not terraced as in the Southwest (U. S.) and in the *Maya* area. The column occurs in a number of different forms. There is a monolithic pillar at Machu Picchu (Bingham, 1913, pp. 498, 512), a square stone and mud pillar at Chachabamba (pl. 83, *bottom*); a large round column with a stone foundation and adobe top at Cacha (Squier, 1877, p. 407); and round adobe ones of *Inca* date at Pachacamac on the Central Coast ("Temple of Pachacamac"). The corbel vault was known but used only in roofing small chambers (Smith, 1940). Architectural sculpture was used occasionally, usually in the form of snakes or pumas on the doorjambs or lintels. Saw-tooth or zigzag walls in fortifications were not common, but occur at Sacsahuaman and a few other sites. The corners of *Inca* walls are always carefully bonded, and long vertical joints were avoided. In adobe construction, alternate rows of headers and stretchers were used ("English bond"). Technically, *Inca* construction is far superior to the best Maya or Mexican work.

Towns and town planning.—Most Indian towns grew up without benefit of architect, and the houses were consequently scattered in a haphazard manner along the paths already in use. (Cf. Shippee, 1934, p. 119.) Cobo remarks that such towns had no regular streets or squares, and the houses were quite widely separated. They were built on slopes and rocky places when possible so as not to occupy land that could be cultivated. Most of these towns contained less than a hundred families (Cobo, 1890–95, bk. 14, ch. 3; see also Estete, 1924, p. 49). Towns were never fortified, the inhabitants maintaining instead a fort or "city of refuge" on some peak near their peacetime settlement. The fort usually consisted of two or three concentric walls surrounding the peak, with houses inside that could be occupied in case of attack. Forts were called POKARA, unfortified towns, LYAQTA.

The *Inca* initiated a policy of urbanization to relocate the Indian towns where they would have easier access to their fields and be further removed from their old forts (Polo, 1940, p. 133). The new sites were laid out by imperial architects, and the various public buildings were built in *Inca* sytle by MIT'A labor. Some towns, especially administrative or political centers, were entirely built by the government. The ideal town seems to have been laid out in square blocks, each containing one, two, or four KANCA type enclosures, but this was modified in practice to fit the topography. The best example of *Inca* town planning is the valley town of Ollantaytambo, where the house blocks are fitted into a trapezoidal space with two large squares on the edge of the house area. (Squier, 1877, p. 492. The plan is exceedingly inaccurate.)

Inca towns were not much bigger than the unplanned towns of earlier periods, and the *Inca* seem not to have practiced urban concentration in the European sense. Cuzco, for instance, consisted of a central ceremonial area, inhabited only by nobles, priests, government officials, and their servants, and a ring of small villages, separated from the center and from each other by open fields. The latter were settled with colonists from all over the Empire, who formed the bulk of the population of the capital (Garcilaso, 1723, pt. 1, bk. 7, ch. 8; Sancho, 1917 b, ch. 17). The ceremonial center was laid out in roughly square blocks, separated by narrow straight streets, and with five or six large squares. In Colonial times, the spaces between the surrounding villages and the center were built up, but the old divisions are still preserved in the parishes whose boundaries date back to the middle of the 16th century. The most important villages around the capital were Santa Ana (QARMIÑQA), Belen (*Cayaucache), San Blas (*Tococache), and San Cristóbal (QOLQAMPATA). Sancho estimates the population of the whole valley of Cuzco as over 100,000 families (1917 b, ch. 17).

Coast architecture contrasted to that in the mountains in being adapted to the need for shade and shelter from the wind rather than shelter from the rain and cold. Houses usually consisted of a pole framework supporting wattle-and-daub walls and a flat roof: more elaborate construction was usually of adobe or poured mud blocks (tapia) (Cobo, 1890–95, bk. 7, ch. 3). It is possible that the *Inca* borrowed the idea of the square-block town plan from the *Chimu* Kingdom, where a very impressive variant of it exists at Chanchan near Trujillo. Coast architecture has been studied even less than Highland architecture, and is an equally rich field.

ENGINEERING WORKS

Roads.—One of the first *Inca* achievements noted and admired by the Spanish conquerors was the superb system of roads which linked up all parts of the Empire. It was this which made possible the administration of such a vast area from a single capital, and, with the Spanish Conquest, it remained for many years a bond holding together the unwieldy viceroyalty of Lima. The general course of the *Inca* roads is pretty well known, as we have several detailed descriptions of journeys made along them and lists of post houses. (See Cieza, 1554, bk. 1; Vaca de Castro, 1909; Poma, 1936, pp. 1082–1093; Regal, 1936.)

Two main roads ran the length of the Empire, one along the Coast and the other in the Highlands, while transverse roads connected all important towns with these roads and with one another. The great

Coast road started at Tumbez, where a lateral branch connected it with the Highland road. It followed the Coast, passing through the valleys at least as far south as Arequipa. Some sources say it went on to Chile, but, if so, the Arequipa-Coquimbo section was very little used. The Highland road began at the Ancasmayo River on the present border between Colombia and Ecuador, ran south through Quito, Huancapampa, Cajamarca, Jauja, Vilcas, and Cuzco to Ayavire, where it split to go around Lake Titicaca. In Bolivia, it went to Chuquisaca and then down through Tupiza to Tucumán. One branch ran out to the coast at Coquimbo and followed the shore down to the region of Santiago, while another went down through Argentina to the neighborhood of Mendoza before crossing the Andes. Branch roads connected Cuzco and Nazca, Cuzco and Arequipa, Chucuito and Arequipa, Jauja and Pachacamac, Chanchan and Cajamarca, and ran eastward to the provinces of Chachapoyas in the north and Paucartambo in the south. A great network of lesser roads linked every town in the Empire.

The Coast road was 12 to 15 feet (4 to 5 m.) wide and, where it passed through irrigated valleys, it was lined with molded mud walls, which were sometimes painted with figures of animals and other designs (Estete, 1924, p. 49). A channel of water ran along its side, and, in places, fruit trees overhung the walls for shade (Xérez, 1917, pp. 32, 37; Molina of Santiago, 1916, p. 128). Where it crossed sandy deserts, however, the road was a mere track in the sand marked at intervals with posts. When it crossed steep hills or rocky headlands, it narrowed to about 3 feet (1 m.), and was cut out of the rock or supported by a retaining wall. If falling earth threatened from above, another wall was built on the inside to hold it back (Cobo, 1890–95, bk. 12, ch. 31).

The Highland road was narrower and unwalled, but the broken country demanded even greater engineering skill. On steep slopes, it zigzagged to reduce the grade, and was provided with stone steps where necessary (Sancho, 1917 b, ch. 7). In marshy places or in areas subject to inundation, it ran on a causeway built up of sod blocks. The causeways were 15 to 22 feet (5 to 7 m.) wide, and 3 to 6 feet (1 to 2 m.) high. They were sometimes paved with flat stones, and at intervals had culverts roofed with stone slabs (Cobo, 1890–95, bk. 12, ch. 31). The road from Phuyupata Marka to Sayaq Marka, cleared by the Wenner-Gren Scientific Expedition in the region of Machu Picchu, is about 3 feet (1 m.) wide, paved throughout with flat stones, and supported by retaining walls 9 to 12 feet (3 to 4 m.) high on steep slopes. It goes over a small causeway of the sort described by Cobo and, rounding a cliff, passes through a tunnel about 15 feet (5 m.) long, made by enlarging a small natural crevice, so that a man can walk through it erect. The tunnel floor is cut into low steps. (See also Fejos, 1944.) Remains of *Inca* roads are numerous throughout the Andes. As the *Inca* had no wheeled vehicles, these roads were designed for men on foot and for llama trains. (See also Xérez, 1917, pp. 22, 32; Molina of Santiago, 1916, pp. 128–130; Cieza, 1880, bk. 2, ch. 15.)

At intervals along the roads, the *Inca* built groups of storehouses and shelters, called TAMPO in *Quechua*, tambo in Spanish.[12] The largest and best furnished tambos were in the towns through which the roads passed, and these were called "royal tambos" by the chroniclers. Lesser ones were built at intervals of a convenient day's journey between the royal tambos, and were called "common tambos." The roads and tambos were kept in repair by the Indians living along them as part of their regular MIT'A tax. (Molina of Santiago, 1916, p. 129; Xérez, 1917, p. 32; Cobo, 1890–93, bk. 12, ch. 31.)

The *Inca* measured road distances with units called TOPO, equivalent to one and a half Spanish leagues, or about 4½ miles (7 km.) (see p. 324). On some roads, especially south of Cuzco, markers like milestones were set up at every TOPO and perhaps every half-TOPO besides (Cieza, 1880, bk. 2, ch. 15; Molina of Santiago, 1916, p. 129).

Post service.—The *Inca* maintained a post service along the main roads to relay messages back and forth to the capital. Every quarter of a league (Polo, 1940, says half league) along the main roads was a pair of huts, one on each side of the road, each hut sheltering two runners (CASKI). The huts were apparently not very large or very well built, as they were called C'OKLYA, "shelter hut," instead of WASI, "house"; Cobo describes those in *Aymara* territory as about the size of a Spanish oven, and built of dry stone. One Indian from each hut was always on the watch for messages, presumably watching in opposite directions. When a messenger arrived, the waiting runner ran beside him to receive the dispatch, usually a short verbal message perhaps accompanied by a quipu or other object, and carried it to the next post. In this way, a very high average speed could be kept up. The runners were provided by the towns along the road as their share of the MIT'A tax. The men served 15-day shifts. The runners were trained from boyhood, and were subject to very severe punishment for failure to deliver messages. (Cobo, 1890–95, bk. 12, ch. 32; Morúa, 1922–25, bk. 3, ch. 24, 29; Polo, 1940, p. 140; Cieza, 1880, bk. 2, ch. 21.)

The average speed of the runners was about 50 leagues a day (probably 150 miles or 240 km.), a figure based according to Cobo, on runs made between Lima and Cuzco during the civil wars which followed the Spanish Conquest. Cobo states that Lima to Cuzco, 140 leagues of bad road, required 3 days. In the middle of the 17th century, the

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[12] There is no good English translation for tambo, because the buildings were designed not for inns but for the use of government officials traveling on business, but tambo is sufficiently well known in anthropological literature to justify its use in English.

Spanish mail did the same distance by horse in 12 to 13 days (Cobo, 1890–95, bk. 12, ch. 32).[13] In addition to using the post for urgent government messages, the Emperor had fresh fish brought to him from the Coast in 2 days (Cobo, 1890–95). Beacon fires were used to send a message with unusual speed (Garcilaso, 1723, pt. 1, bk. 6, ch. 6; Pachacuti, 1879, p. 319).

Bridges.—The *Inca* had a number of different ways of crossing rivers. Most Andean rivers are small, and can be easily forded, except in the rainy season. A few of the larger rivers were sufficiently placid to be crossed by balsas; a balsa ferry was operated across the Santa River on the North Coast in *Inca* times (Cieza 1554, bk. 1, ch. 70; Cobo, 1890–95, ch. 14), and another is still in use on the Azángaro River in Puno. For the most part, however, the mountain rivers are so swift that if the water is even knee deep, some sort of bridge is necessary.

Across a narrow river, the *Inca* laid long beams and covered them with cross bars and branches. The Huatanay River in Cuzco was bridged on the same principle, but with great slabs of stone 9 to 12 feet (3 to 4 m.) long, many of which were still in place until recently when the river was newly canalized.

Wide rivers were spanned by suspension bridges, which were very skillfully constructed. The bridges were hung from four masonry pillars or towers, two on each side of the river, into which were set the beams from which the cables of the bridges were hung. Five cables, each some 16 inches (40 cm.) in diameter and made of supple twigs twisted or braided together, were required for each bridge. The cables were wound around the beams in the supporting towers as tightly as possible, and fastened securely. Three formed the floor of the bridge; two, the guard rails. For the floor, small cross poles were fastened to the cables, and covered with smaller sticks and brush. The guard rails were formed by weaving a vine or rope back and forth between the floor and the guard-rail cables, and served mostly to give the traveler a sense of security. The middle of such a bridge sagged considerably from its own weight. The *Inca* apparently never thought of hanging the floor below the cables and adjusting the vertical ropes which supported it so that the floor was level. No guy ropes were used, and the bridges swayed in the slightest wind. Nevertheless, the construction and maintenance of a suspension bridge 200 feet (about 65 m.) long, such as Father Cobo crossed at Vilcas and at the Apurimac River, was no small feat. The bridges were cared for by nearby villages as part of their MIT'A tax, and had to be rebuilt every year. (Cobo, 1890–95, bk. 14, ch. 13; Estete, 1917, p. 81; 1924, p. 37; Sancho, 1917 b, chs. 6, 13; Xérez, 1917, p. 32; Morúa, 1922–25, bk. 3, chs. 18, 27; Poma, 1936, pp. 356–357.)

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[13] Means gives an interesting table of the speed of the runners according to the different chroniclers (1931, p. 334).

The *Inca* maintained a pontoon bridge across the Desaguadero River near Lake Titicaca. It consisted of a row of balsas with a road built across them on poles. This floating bridge was in use until modern times (Cieza, 1554, bk. 1, ch. 91; Squier, 1877, p. 309).

Where the traffic did not justify a bridge, the *Inca* built a contrivance (OROYA) similar to our breeches buoy for transporting passengers and goods. A large basket with a loop handle hung from a single straw cable stretched between two masonry pillars on opposite sides of the river. The basket slid along the cable and could be drawn to either bank of the river by means of additional ropes tied to it. Sometimes, the load was merely tied up with ropes and hung from a wooden hook which passed over the main cable (Cobo, 1890–95, bk. 14, ch.13).

Guards stationed at the bridges prevented the unauthorized movement of gold and silver and made minor repairs when necessary (Sancho, 1917, ch. 6). Xérez and Estete both speak of a bridge toll paid in kind by travelers, and Xérez says that the guards were supposed to see to it that more goods were not removed from a province than entered it (Xérez, 1917, p. 32; Estete, 1917, p. 99). Presumably, the guards controlled only private traffic, and the regulations were probably intended to discourage travel and limit private commerce rather than to raise revenue.

Waterworks.—The *Inca* expended much skill on irrigation works and water-control projects, extensive remains of which survive to the present day. Irrigation ditches often ran for miles along the side of a valley to irrigate a comparatively small terraced area. Running water was provided in many *Inca* sites by covered stone channels running under ground for long distances. The most elaborate piping systems of this kind are in Sacsahuaman at Cuzco. Garcilaso describes a fountain in the Temple of the Sun at Cuzco which was supplied by a pipe which ran under the Huatanay River, and climbed the steep hill to the Temple (Garcilaso, 1723, pt. 1, bk. 3, ch. 23; see also Squier, 1877, p. 442). The source of the water for this fountain must have been at some altitude to provide sufficient pressure.

Many Highland rivers were canalized and their courses straightened. *Inca* retaining walls are still visible at many places along the Urubamba River, notably just above Ollantaytambo. Bingham illustrates a section of the Pampacahuana River, the channel of which is lined with *Inca* walls (Bingham, 1916, p. 484). The Huatanay and Tullumayo Rivers in Cuzco were canalized, and the bed of the former was completely paved where it flowed through the city (Sancho, 1917, ch. 17; Estete, 1924, p. 45).

DRESS AND ORNAMENTS

Inca clothing (fig. 26, *d*) was originally made entirely of wool, but with improved communications cotton from the Coast became available for garments in the Highlands. Tailored clothing was unknown, and the only fastenings used, aside from the straight seams which joined the edges of woven rectangles, were straight metal pins.

Men's garments.—The ordinary man's dress consisted of a breechclout and a sleeveless tunic, with a large cloak for cold weather and dress occasions. The breechclout was a strip of cloth about 6 inches (15 cm.) wide which passed between the legs and over a narrow belt in front and back, with the ends hanging part way down the thighs. It was a symbol of manhood, put on at the age of about 14 as part of a maturity rite (WARACIKOY, "putting on the breechclout". See p. 283). The sleeveless tunic (OÑKO) consisted of a long piece of cloth with a slit in the middle for the head (pl. 80, *top*). It was doubled over, sacklike, and the sides sewn up leaving spaces at the top for the arms. It reached nearly to the knees. In certain ceremonial costumes, a longer ankle-length tunic was worn. Fine tunics might be decorated all over, but the usual design was an inverted triangle at the neck and a broad band around the waist and the lower edge. The band at the waist often consisted of rows of small squares, each containing a geometric design of the sort used on war shields, which probably had heraldic significance. (For illustrations, see Bandelier, 1910, pls. 62 and 69; Montell, 1929, figs. 87, 88, and references, pp. 194–5).

Over the tunic, men wore a large cloak about 6 by 5 feet (190 by 150 cm.) in size. It was made of two strips of cloth sewn together up the middle like the mantles worn by present-day Indian women. It was either thrown over the shoulders with two corners tied over the chest or tied over one shoulder to leave an arm free. The cloak was removed during violent exercise.

Under the cloak but over the tunic, men carried a small coca bag about 8 inches (20 cm.) square, hung over the left shoulder and under the right arm. It held amulets, small tools, and anything the wearer wanted to carry, as well as his coca. (For illustrations of men's dress, see Poma, 1936, especially pp. 115, 145, 159.)

The *Inca* ordinarily wore sandals of untanned leather with elaborate woolen fastenings. Guaman Poma illustrates sandals with one cord crossing the top of the toes and another running from the top of the foot, through a loop in the side of the sole, passing around the heel and through another loop on the other side to the top of the foot, where the cord ends were elaborately fastened (Poma, 1936, pp. 145, 161, 362). The cords were of braided wool with a pile surface for softness. The soles were made of llama-neck hide and were cut a little shorter than the foot. Because the leather was untanned, the sandals had to be removed in wet weather, as the sole softened in water. Sandal tops were sometimes decorated with gold masks.

In some parts of the southern Highlands, moccasins were sometimes worn instead of sandals, but little is known about their shape or manufacture. Poma illustrates a pair on the feet of a chief from Collasuyo (1936, p. 169), and occasional specimens have been found in graves on the Coast. Moccasins are still made and worn in the Province of Chumpivilcas and elsewhere, and would make an interesting study. (See also Montell, 1929, pp. 209-211.) The *Inca* wore fringed leg bands below the knees and at the ankles, but no other leg covering (Poma, 1936, pp. 110, 157).

Knitted caps were worn in ancient times only by the *Aymara*. Most other Highland Indians bound their hair either with a specially woven band or braid (LYAWT'O) or with a sling. The Emperor's band, about ⅕ inch (5 mm.) thick and ½ to 1 inch (1 to 2 cm.) wide, was wrapped many times around the head, forming a sort of head band or turban about 2 inches (5 or 6 cm.) wide. The curious gold crown represented in certain late "portraits of the Incas" derives from a misunderstanding of earlier representations of a yellow LYAWT'O. The LYAWT'O was not an insignia of royalty, but a headdress commonly worn by the men of many tribes in Peru. Neither was it a fringe. The symbols of royalty were ornaments added to the LYAWT'O and supported by it: a fringe or series of tassels worn in the center of the forehead, and a pompom on a small stick worn above it. (See Political Organization, p. 258.) Confusion of the LYAWT'O with the fringe is common in modern literature.

Women's garments.—*Inca* women wore a long dress, bound at the waist by a wide sash, and a mantle similar to that worn by the men. The dress was a rectangular piece of cloth wound around the body under the arms with the edges overlapping on one side, and the top edges were pulled up and fastened with straight pins over the shoulders. The skirt came down to the ankles. The sash was often decorated with square heraldic patterns like those on men's tunics. A large mantle, worn over the dress, was thrown over the shoulders and fastened on the chest with a large decorative metal pin (TUPU) (pl. 79, *a*, *b*); it hung down behind to about the middle of the calf. The pin was of gold, silver, or copper, with the head beaten out flat and perforated for small bells or colored threads. The round or semicircular head had edges sharp enough to be used as a household knife. These pins, made in a variety of sizes, are very common inarcheological collections.

Women's sandals were like men's.

Women bound their hair with a woven band similar to the LYAWT'O but passing around the head only once. In addition, they covered their hair with a square of fine cloth folded lengthwise three or four times and laid on the head so that one end came above the forehead and the other hung down the back. (For illustrations of women's dress, see Poma, 1936, pp. 126, 136, 138, etc.)

Ornaments.—Both sexes wore jewelry of several kinds. All men of royal lineage and "Inca by privilege" wore large cylindrical earplugs of gold, wood, or other materials which had a large round head on one end about 2 inches (5 cm.) in diameter. These were worn through the ear lobes with the head facing forward. Boys' ears were pierced for these plugs when they put on their breechclouts, about the age of 14. Many other Andean peoples used similar earplugs, distinguished in material or design from those of the *Inca*, which were insignia of rank.

Men wore also wide gold or silver bracelets, and metal disks hung around their necks or on their heads. The latter were state awards for bravery in war. Miniature gold masks were also worn occasionally on the sandals, the shoulder, or at the knees. Soldiers wore necklaces of human teeth taken by themselves or their ancestors from slain enemies. In some festivals, they wore feather crowns or collars.

Women did not pierce their ears or wear any kind of earrings. Their only jewelry was their pins (TUPU) and necklaces of shell or bone beads. Noble women are often represented on lacquered wooden cups with flowers in their hands.[14]

Hair styles.—*Inca* men cut their hair, probably with obsidian knives. They wore bangs over the forehead and a long bob behind which covered the ears. Women wore their hair long (fig. 26, *c*), parted in the middle and falling straight down the back. (Cobo, 1890–95, bk. 14, ch. 2; Poma, 1936, pp. 120, 136; Garcilaso, 1723, pt. 1, bk. 8, ch. 13.) Hair styles apparently varied markedly from one province to another. Poma shows *Rucana* and *Colla* men with long hair (1936, pp. 169, 331). In some areas the women wore two big braids or a large number of small ones. The latter style was particularly common among the *Aymara*, and is attested for the *Cana* by hair from a tomb with Collao black-on-red pottery at Tinajani near Ayaviri, now in the Sección Arqueológica, University of Cuzco. Both sexes used combs made of a row of thorns tied between two slivers of wood (University Museum, Cuzco; see Poma, 1936, p. 140). Women cut their hair only as a sign of mourning or disgrace (Cobo, 1890–95, bk. 14, chs. 2, 19). Garcilaso mentions hair dyeing (1723, pt. 1, bk. 8, ch. 13).

Deformation.—Head deformation, though not universal in the *Inca* Empire, was widely practiced by both Coastal and Highland people. The *Aymara* produced long heads by binding the heads of babies with cloths; this shape (called Q'AYTO-OMA, "string head") was practiced as well by many peoples who did not speak *Aymara*. Deformation by tying a board onto the forehead (P'ALTA-OMA, "flat head") was also widespread. The *Cavana* were its best known users. (Morúa, 1922–25, bk. 3, ch. 52; RGI, 1881–97, 2: 41; Cobo, 1890–95, bk. 14, ch. 6.) Head deformation is not specifically ascribed to the *Inca* proper, but deformed skulls have been found in the Urubamba Valley.

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[14] The above description of *Inca* costume is taken from Cobo, 1890–95, bk. 14, ch. 2, with additional details from Guaman Poma's illustrations. Further references and illustrative material may be found in Montell (1929). The coca bag and sandals are the only elements of ancient costume still generally used by Indian men, although the tunic is occasionally worn for festivals in some towns. Women still use variations on the mantle, head cloth, and tupu.

According to Morúa, thick thigh and shin flesh was considered a mark of beauty in *Inca* women, who tied strings above and below the knee to produce it (1922–25, bk. 1, ch. 17).

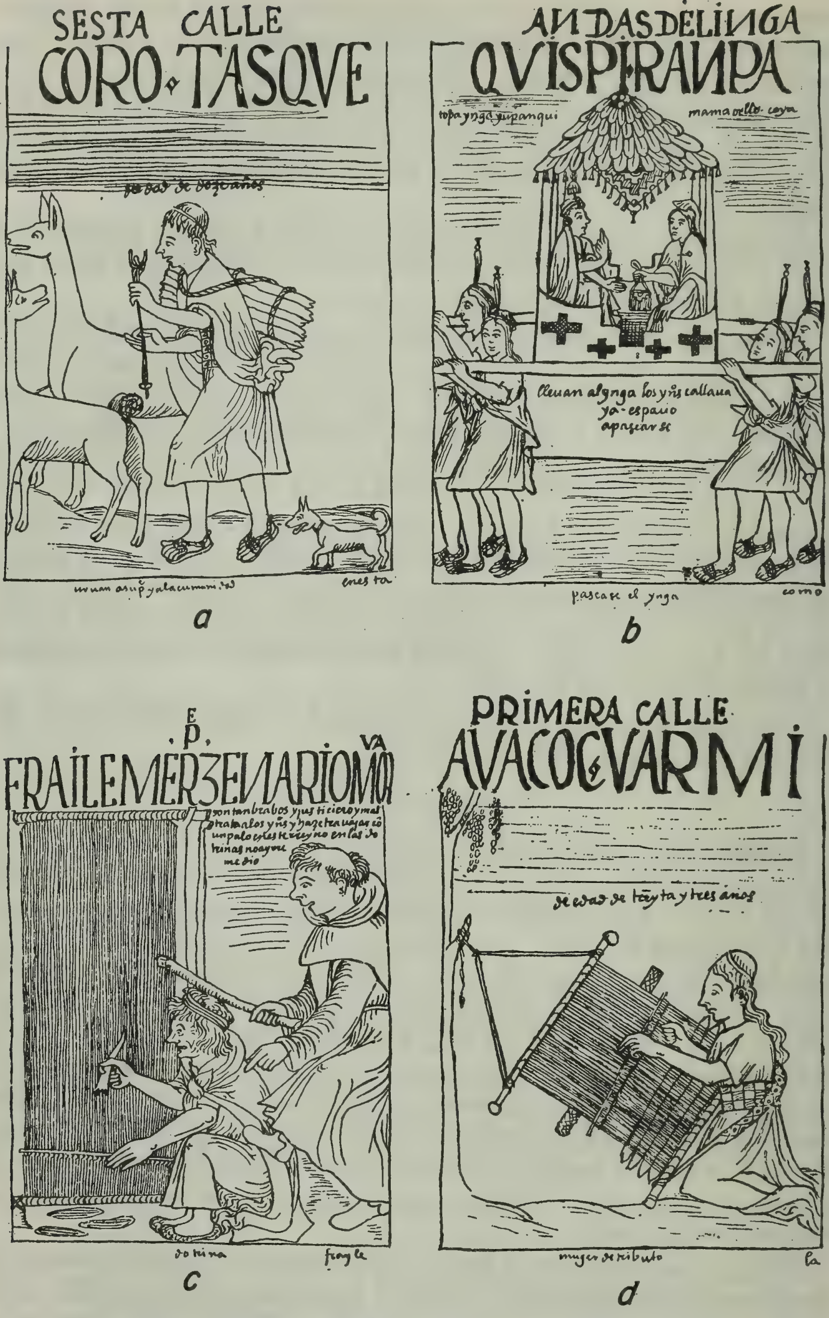
Paint.—The *Inca* used face paint in war, in mourning, and probably in ceremonies, but our information on the subject is scanty. Face paint in war is mentioned by Las Casas (1892, ch. 6; achiote); Cobo (1890–95, bk. 14, ch. 9; many colors); Cabello de Balboa (1840, p. 285; many colors); and Acosta (1940, bk. 4, ch. 11; cinnebar). Black paint was used in mourning (Pachacuti, 1879, p. 275, women; Cieza, 1554, bk. 1, ch. 83, province of Tarma). The commonest colors seem to have been vermilion from cinnebar and reddish purple from achiote or genipa (*Bixa orellana*). At llama sacrifices, the priests drew lines on the faces of the persons making the offering with the animal's blood (Cobo, 1890–95, bk. 13, ch. 25). See also the discussion of "body" painting in Montell, 1929, pp. 219–222.

Tattooing was practiced on the coast but apparently not in the Highlands (Montell, 1929, pp. 148–151).

TRANSPORTATION

Human.—All transportation on land was on the backs of men or llamas or by litter. The standard method was to load heavy objects in the center of the cloak or mantle, fold two opposite corners over the load, grasp the other two corners, swing the cloth onto the back, and knot the corners on the chest. This method was used in ancient times by both men and women (fig. 27, *a*) (Poma, 1936, pp. 196, 225, 356, 531, etc.; Cobo, 1890–95, bk. 14, ch. 6). Pottery jars full of liquid were carried on the back with a rope. *Inca* jars had a projecting knob on the shoulder, and two vertical strap handles near the bottom. The carrying rope passed through one handle, up over the nob, and down through the other handle. It could also be wound around the neck (Poma, 1936, p. 246). Other heavy objects were probably carried similarly with a rope.

The use of a tump line (a band passing over the forehead) to support loads carried on the back is depicted by Poma (1936, pp. 229, 1147, 1150) but is not mentioned in other sources. The tump line may have been used in Rucanas, where Guamán Poma came from, or in neighboring regions which he visited.


SESTA CALLE
CORO·TASQVE
de edad de doze años
en esta
a
ANDAS DE LINGA
QVISPIRANPA
topa ynga yupanqui
mama ocllo coya
lleuan al ynga los yn̄s callaua
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apasear se
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FRAILE MERZENARIO MA
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son tan brabos y jus ticieros y mal
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PRIMERA CALLE
AVACOC VARMI
de edad de treynta y tres años
mujer de tributo
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Figure 27.—*Inca* transportation and weaving. *a*, Girl carrying a load of wood. *b*, The Emperor, Topa Inca, and his queen riding in a litter with *Callahuaya* bearers; *c*, vertical loom for weaving tapestry cloth; *d*, Mochica type loom for weaving warp-face cloth. (After Guaman Poma, 1936, pp. 225, 331, 647, 115.)

Animal.—Llamas, extensively used to transport light loads, can carry up to about 100 pounds if the weight can be equally distributed on both sides of the animal's back, preferably in woolen saddle bags. The llama was ridden occasionally in ancient times, but it tires so easily under even a small man as to be worthless as a mount. It has great endurance and can find its own feed along the road, but must travel very slowly and be relieved frequently. The lead llama in a pack train was and is decorated with ear tassels and bells, and the other animals seem to recognize his leadership.

Litters.—Litters in the *Inca* Empire were restricted to the highest nobility. They consisted of two long poles resting on the bearers' shoulders with a passenger seat built on a floor across the middle. Security was provided by boxing in the sides and ends of the seating platform. In the most elaborate litters, the seats were protected from the sun by a roof or canopy of feather cloth. The seats were the usual low carved stools covered with fine cushions. Litters were built to seat one person or two people sitting face to face. The ends of the carrying poles were sheathed in silver or other metal, often in the shape of an animal's head, and the whole litter was lavishly decorated. Four Indians, picked for their smooth pace, carried the poles and were relieved at frequent intervals. This type litter was used by the Emperor and members of his immediate family (fig. 27, *b*). When Atahuallpa entered Cajamarca, the Spaniards estimated that he had 80 litter bearers in blue livery with him. (Poma, 1936, pp. 331, 333; Xérez, 1917, p. 58; Estete, 1924, p. 30; González, 1608; Cieza, 1880, bk. 2, ch. 20.) The *Rucana* were the most famous litter bearers, but Guamán Poma mentions *Callahuaya* bearers (1936, p. 331). Huascar's litter bearers in his final defeat were *Rucana* and *Camanata*, i. e., Indians of Camana Valley (Pachacuti, 1879, p. 322).

González mentions another type of litter, which he compares to a barbacoa (elevated frame or platform), and a frame for carrying beams. Xérez mentions two carrying hammocks in Atahuallpa's train, but gives no details (Xérez, 1917, p. 58). For litters on the Coast, see Carrión (1940).

Boats.—Andean boats and navigation have aroused wide interest in modern times, and at least two good studies of the subject exist in English (Lothrop, 1932; Means, 1942). For navigation on Lake Titicaca, see this volume, page 533.

In the immediate neighborhood of Cuzco, there was little reason to make boats, for the lakes are very small and the rivers swift. If *Aymara*-type totora-reed balsas were made, they did not attract the Spaniards' attention.

On the Coast, small fishing balsas were made like the *Aymara* balsas but had long tapering prows and square-cut sterns (Bingham, 1913,

p. 389). They generally supported only one fisherman, and were light enough to be carried by one man. They had to be taken apart and dried out every night, or they became waterlogged and useless. The Indians of the Coast ventured as far as six leagues (about 18 miles) out to sea in these craft, going usually in groups. They were propelled by a split cane used as a double-bladed paddle (Cobo, 1890–95, bk. 14, ch. 14).

At Arica and Tarapaca, the Indians made balsas of two inflated seal skins lashed together. These craft also supported only one Indian each, and were very light but demanded more care than the reed balsas of the North and Central Coast, as the air leaked out in use. The fishermen carried tubes with which they could blow into the skins and reinflate them when necessary (Cobo, 1899–95, bk. 14, ch. 14).

At the ford of the Santa River on the North Coast, floats were made of large number of gourds put into a net, on top of which rode the passengers or cargo. The floats were propelled by swimmers. Cobo saw rough cane rafts used on the Apurimac River as emergency ferries when the bridge broke in 1616 (1890–95, bk. 14, ch. 14. See also RGI, 1881–97, 1: 86).

The real limitation to Peruvian navigation was not lack of ingenuity but lack of convenient supplies of suitable lumber. From Payta in northern Perú to Manta in Ecuador, the Indians built large seagoing balsa-wood rafts, which were among the most seaworthy craft in all South America. They laid out seven to nine balsa-wood logs of graded lengths, so as to make a pointed prow and square stern, and lashed them together with lianas and cords. A platform was built on top to keep the cargo dry, and a mast was stepped in the middle log. These rafts had sails and oars, and were large enough to carry 50 men (Cobo, 1890–95, bk. 14, ch. 14; Estete, 1924, p. 18 and note 25, p. 61). Topa Inca was supposed to have made his voyage of exploration in the Pacific in this type of boat (Sarmiento, 1906, ch. 46). Huayna Capac had balsa-wood logs brought to the two largest Highland lakes to build large rafts there. The Spaniards found them in Lake Junín (Xérez, 1917, p. 93), and in Lake Titicaca (Valverde, 1879).

MANUFACTURES

Weaving.—Highland cloth was made chiefly of wool, which was warmer and held its colors better than cotton. Cotton, however, was also available, being traded from the lower eastern valleys and the Coast. Alpaca wool was preferred for clothing, but llama wool was used also, especially for very coarse cloth. The finest material was vicuña wool, to which the Indians occasionally added viscacha and bat wool. Vicuña wool is soft, silky, and admirably suited to luxury weaving. The Spaniards compared it favorably with silk

(Cobo, 1890–95, bk. 14, ch. 11). Bat wool is very short staple to be successfully woven.

Wool was used both in its natural colors and dyed with vegetable dyes, an enormous variety of which were used by the Highland Indians. The wool was always dyed before spinning according to Cobo (1890–95, bk. 14, ch. 11). Plants for dyes were gathered by girls, 9 to 12 years old, too young to do full adult work (Poma, 1936, p. 228).

Spinning.—Spinning was done mostly by the women, who amused themselves with it when out walking as well as in the intervals of other housework. The wool to be spun was wound on the wrist or held on a distaff, which consisted of a stick perhaps 8 inches (20 cm.) long with two horns on the top in the shape of two-thirds of a ring. The spindle was a straight stick a little longer than the distaff with a wooden or pottery whorl. The distaff was held in the left hand and the thread pulled out and formed with the right hand, the spindle hanging free in the air or with one end resting in a pottery plate. The thread was usually spun clockwise, except in manufacturing articles to be used in sorcery. The spun thread was doubled and twisted counter clockwise to prepare it for weaving. Men, especially old men, often helped the women twist the thread. (Cobo, 1890–95, bk. 12, ch. 11; Garcilaso, 1723, pt. 1, bk. 4, ch. 13; Poma, 1936, p. 298; archeological specimens in Cuzco collections.)

Looms.—Three kinds of looms were used. The first or belt loom appeared earliest in the Mochica culture of the North Coast (Montell, 1929, p. 111; Means, 1931, fig. 2). It consisted of two parallel rods which supported the warp, one of which was fastened to a tree or post while the other was furnished with a belt which passed around the waist of the weaver, who sat or knelt in front of his (or her) work and varied the tension on the warp by shifting his own weight (fig. 27, *d*). This type of loom is illustrated by Poma for the Highland Indians in general and the *Rucana* in particular (1936, pp. 215, 217, 564, 645).

The second or horizontal loom is used principally by the *Aymara*, in modern times. The two horizontal rods which supported the warp were fastened some 16 inches (40 cm.) above the ground to stakes. The face of the cloth was horizontal and the weaver had to lean over it. Both of these types of looms were equipped with a heddle consisting of a light rod with loops which passed over alternate warp threads, a variety of weave swords for beating down the finished work, pointed bone picks, and bobbins.

The third type of loom was a vertical frame of four poles, built against a wall, on which QOMPI was woven (fig. 27, *c*). The weaver worked standing. (Cobo, 1890–95, bk. 14, ch. 11; Garcilaso, 1723, pt. 1, bk. 5, ch. 6; Poma, 1936, p. 647.)

Cloth.—Three grades of cloth were made, each distinguished by a *Quechua* name. The coarsest (COSI), which had weft threads as much as ⅜ inch (1 cm.) in diameter, was used only for blankets. The cloth used for ordinary clothing was called AWASQA, "woven material". The finest cloth (QOMPI) was finished on both sides and woven in many colors with a large number of small bobbins (Cobo, 1890–95, bk. 14, ch. 11). A comparison of these data from the chroniclers with the few known examples of Highland weaving of *Inca* date suggests certain interesting correlations. The ordinary cloth found in ancient graves in the Cuzco region is almost all warp-face plain cloth, usually without design, but sometimes decorated with warp stripes or with geometric patterns made by adding threads of different colors to the warp and inserting the weft in such a way that the extra warp threads come to the surface only where their colors are needed in the pattern (Early and Late *Inca* textiles from Ausangate and Yucay in the University Museum, Cuzco). Most other known *Inca* pieces are done in a fine tapestry weave, using more colors than the ordinary pieces, and finished on both sides. Most of the fine Colonial pieces showing a mixture of *Inca* and Spanish styles are also tapestry weave, sometimes with added embroidery. (University Museum collection, Cuzco; Bandelier, 1910, pls. 62, 69; Means, 1917, pls. 16, 17; Crawford, 1916, figs. 8, 9, and pp. 121–122.) The conclusion is almost unavoidable that the cloth called AWASQA by the *Inca* was warp-face plain cloth with pattern in the warp, and that QOMPI was tapestry-weave material. (See also Means, 1931, p. 478.)

Tapestry weaving was done well into the 17th century, and perhaps later, but then began to decline, and seems not to be practiced by hand-loom weavers in southern Perú today. On the other hand, the warp-faced, warp-pattern technique is now universal, and the modern pieces are very much more elaborate than the old ones. As in most other aspects of Indian culture, the Spaniards suppressed the luxury arts and the civilization of the nobility, but the folk arts remained vigorous and have preserved their old traditions down to the present. As the technique of weaving QOMPI fell into disuse, the special vertical frame on which it was woven disappeared. Modern looms are of the belt and horizontal types or are of European origin.

The *Inca* made two other varieties of cloth by adding feathers and metals superficially to the woven material. The feather cloth was particularly fine. Cobo emphasizes the small size of the feathers inserted in the weft while weaving QOMPI. No feather pieces of positive *Inca* date are known to exist, but beautiful examples of the technique have been found in Coastal graves (Means, 1931, frontispiece). Ornamentation with figures cut from paper-thin sheets of hammered gold and silver sewn on the cloth in patterns (*chaquira) was widely used (pl. 79, *c*). All known specimens of this are also of Coastal origin, but round gold bangles with a hole in the edge, which were probably sewn on cloth, have been found in several excavations. (Bandelier, 1910, pls. 66, 78; Bingham, 1930, fig. 158; Cobo, 1890–95, bk. 14, ch. 11.) More archeological studies of *Inca* Period textiles are urgently needed.

Basketry, cordage, and matting.—Abundant material for study exists in tombs near Cuzco, a little of which has found its way into museums, but none of which has been studied. From superficial observation, it seems that the *Inca* made technically excellent baskets and mats, but took little trouble to decorate them, reserving their best efforts for textiles, pottery, metalwork, and wood.

Skin preparation.—The *Inca* had little use for skins. Llama neck skin was used for sandal soles, and braided rawhide thongs were used as alternatives to wool to make bolas and slings. Drumheads were made of skin. Bodies were sometimes sewn in hide for burial. In certain ceremonies, jaguar, puma, or deer skins were used for dance costumes. Tanning was not practiced, so that skin objects had to be be protected from water. Skins were probably prepared in the manner still in use among the *Aymara* (p. 535). (See also Cobo, 1890–95, bk. 14, ch. 2; Garcilaso, 1723, pt. 1, bk. 8, ch. 16.)

Pottery.—The chroniclers say little about *Inca* pottery, and most of their observations can be readily verified on archeological specimens. (Cf. Cobo, 1890–95, bk. 14, ch. 4.)

Late *Inca* (Cuzco Series) pottery is a beautifully made ware, fine-grained and of almost metallic hardness. It is generally thicker than earlier wares, and has a highly polished surface. The paste often shows a gradation of color from firing, the surfaces being brick red or orange, while the center is gray. The sherds show no tendency to split, however. Large pieces are frequently fire-clouded. The most common colors used for painting were white and lustrous reds and blacks, all mineral pigments.

Of a wide variety of shapes, the two most common are a shallow plate (pl. 77, *b*) with one or two handles and a jar (aryballos) with a pointed foot, two low-set vertical handles, and a long neck (pl. 77, *a*). The latter is for the storage and transportation of liquids. The most common shapes of Late *Inca* pottery have been illustrated a number of times (Bingham, 1930, figs. 70–72; Rowe, 1944). Late *Inca* ware (fig. 28) is characterized in general by a high degree of technical excellence and the constant repetition of simple geometric patterns in the decoration. (See p. 287.)

Potter's clay is abundant in the neighnorhood of Cuzco. The most famous pottery works in ancient times were those at San Sebastián (SANYO), about 3 miles (5 km.) from Cuzco, the name of which became a general name for pottery in *Quechua*, much as "china" is used in English. *Quechua* has a wide variety of terms for pottery shapes.

Certain peculiar features of *Inca* vessels deserve special notice. Annular bases were unknown in the Cuzco region before the Spanish Conquest, but cooking pots had a stem and foot, like a goblet, or else three solid cylindrical feet (pl. 77, *f*). Flat or concave covers with loop handles were also used. Rims were usually flaring or else a flat lip was added, but thickening was not used. Modeled ornament includes puma-head knobs on liquid jars, plate handles in the shape of bird heads, eyes and noses added to jar necks, and simple modeled snakes or buttons on cooking pots. Other forms are very rare. Incised and stamped decoration was not ordinarily used. Braziers and small stoves were made out of pottery (pl. 77, *g*). (See Bingham, 1915 b, p. 206; 1930, figs. 125–126.) Pottery was also used for dice (Bingham, 1915, p. 176; 1930, fig. 172, *b–h*), spindle whorls (Bingham, 1915 b, p. 208; 1930, figs. 182–183), and ladles (Pardo, 1939, pl. 2, *g*, *h*, *i*).

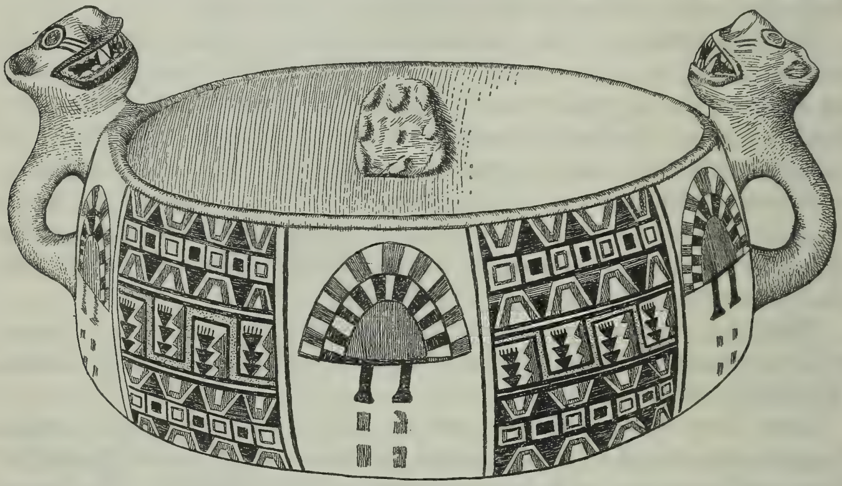

Figure 28.—Late *Inca* polychrome bowl. (Redrawn from Bandelier, 1910, pl. 76.)

Settlers from all parts of the Empire came to Cuzco after it was rebuilt by Pachacuti, and brought their own local pottery. North Coast (Late Chimu black ware), South Coast (Ica style black ware), and Colla and Lupaca Provinces (Chucuito polychrome and Sillustani polychrome) wares have been identified in excavations in Cuzco. Many other pieces will probably turn out to be styles of distant origin when more is known.

Woodworking.—The *Inca* made wooden cups, spoons, and stools, and used wood in roofing houses, making looms, and building litters.

The most important of these articles was the wooden cup or kero (QIRO), so that professional woodworkers were called QIRO-KAMAYOQ, "cup specialists" (RGI, 1881–97, 1: 97; Falcón, 1918, pp. 149–151).

Cups.—Wooden cups held ¼ to 2 quarts and were shaped like our tumblers, somewhat wider at the mouth than at the base; some had slightly concave profiles (pl. 80, *bottom, left*). The sides were about ½ to 1 inch (1 to 2 cm.) thick; the largest, nearly 16 inches (40 cm.) high. Some are carved in the shape of a puma or jaguar's head (pl. 80, *bottom, right*), and others in the shape of a man's. Rare specimens have carved handles or elaborate bases, but the majority have simple tumbler shapes. Some have geometric patterns of lines cut into the wood, usually arranged in zones; others have lead inlay made by pricking a pattern of small holes and filling them with lead. The majority are inlaid with true lacquer, which Nordenskiöld first identified (1931 a, pp. 95–100). The designs were cut into the surface in low intaglio, and the hollows filled with several colors of lacquer fastened in by a vegetable gum. The technique seems to have been borrowed by the *Inca* from the South Coast, where it was used to decorate wooden "paddles." Nordenskiöld illustrates a lacquerer's kit of colors from a Coast grave.

Inca style wooden cups continued to be made until well along in the Colonial Period, probably sometime in the 18th century, and the later ones have representations of Europeans and Indians in Hispanicized dress. The designs on the cups are superb, showing battle scenes, hunting, expeditions to the eastern forests, dances and festivals, plants, animals, heraldic motives, historical scenes, *Inca* and Colonial costume, and nearly every aspect of Indian life. The drawing is lively and competent, the colors vivid. No greater service could be done to the study of *Inca* and Colonial life than to publish an illustrated study of the lacquered cups now in museums and private collections. The designs are among the finest products of *Inca* art, and are worthy of comparison with the best work of the Mexican codices. (See Cobo, 1890–95, bk. 14, ch. 4; González, 1608, p. 304; Musée d'Ethnographie du Trocadero, 1933, pls. 1–5.)

Spoons.—*Inca* spoons were made of wood and occasionally of bone or copper. They had a shallow bowl and a perfectly straight handle. Although not common collection pieces, quite a variety exist. The University Museum at Cuzco has a good collection (Valcárcel, 1935 b, p. 191). For stools, see page 224.

Gourds.—Gourds were used to a limited extent for measures of volume and as substitutes for pottery. The *Inca* got them by trade from warmer regions, and they were often brightly painted (Cobo, 1890–95, bk. 14, chs. 4, 15).

Mining and metallurgy.—Spanish ideas influenced Indian mining practice probably sooner than any other part of native culture because of the Spanish preoccupation with precious metals. Only a very early description of Indian mining could be expected to represent aboriginal conditions. Fortunately, we have an account of 1534, based on the first Spanish visits to the region around La Paz in Bolivia. Although the account refers specifically to gold mining in *Aymara* territory, it may be assumed to apply to the *Inca* as well, except that mining was much less important in the Cuzco region than south of Lake Titicaca.

The technique of mining will be described in the Handbook, Volume 5, under Metallurgy.

The mines were worked only 4 months a year, from noon to sunset each day, so as not to overtax the miners and to take advantage of the warmest weather. All the gold was taken by the government, which kept inspectors at the entrance to the mining area to see that none was stolen. The miners were furnished by the neighboring provinces in groups of 20 to 50 men, obviously MIT'A labor service (Sancho, 1917 b, ch. 18).

The *Inca* mined a great variety of metals. Copper was the most important, and the only metal in general use among the taxpayers. Gold and silver were reserved for the use of the Emperor, and of nobles to whom the privilege was expressly granted. Tin was mined to be mixed with copper in the making of bronze. Platinum was used in parts of Ecuador which lay within the Empire, but never elsewhere in the Andean region. There is a *Quechua* word for iron (*quellay), but it probably refers to meteoric iron or to heavy metallic ores like hematite, for there is no evidence that the *Inca* knew how to smelt iron and it does not occur pure in the ground. Lead was used to inlay wood.

The hills where ore deposits were found and the mines themselves were both regarded as huacas (shrines), and the Indians prayed to them to give up their metal. Festivals were held in their honor at which the miners danced and drank chicha all night. (Cobo, 1890–95, bk. 13, ch. 11.)

More different technical processes for treating metal were used in the Andean region than in any other part of America, and most of them were known at Cuzco. The processes represented by objects from Late *Inca* sites or done in obviously *Inca* style include: Smelting, alloying, casting, hammering, repoussé, incrustation, inlay, soldering, riveting, and cloisonné. At least one alloy, bronze, was known. It contained varying percentages of tin.

The technology of metallurgy is fully discussed in the Handbook, Volume 5,

The *Inca* hammered and annealed the cutting edges of knives, axes, and chisels in order to secure maximum hardness. (Mathewson, 1915; Mead, 1915; Nordenskiöld, 1921.) Gold and silver were hammered into thin sheets, and the decoration added by hammering the back of the sheet to leave a relief design on the face (repoussé).

Casting was very skillfully done. Nearly all *Inca* cast objects are of bronze, for silver and gold were usually treated only by hammering, except when used as inlays. Bronze bolas weights from Machu Picchu have a hemispherical depression in the top with a pin across it, all cast in one piece. The decorative heads for TOMI knives were cast to leave a considerable extension of unshaped metal from which the blade of the knife was afterward formed by hammering and cutting (Mathewson, 1915).

The appearance of solidity was produced by making a hollow shell of sheet gold or silver hammered in the desired shape, perhaps a human figure or a model llama. Nevertheless, the chroniclers refer occasionally to objects of "solid gold," and perhaps the lack of cast objects in our collections is the result of historical selection.

Riveting was skillfully done in building up objects of sheet metal, and edges were soldered with the same metal being joined. Small holes were drilled, but larger holes in solid objects were usually cast in the piece, to save trouble (Mathewson, 1915). The *Inca* seem not to have plated but the practice was known on the North Coast (Lothrop, 1938, pp. 17–19).

Both incrustation of other materials in metal and inlay of one metal in another were practiced by the *Inca*. A fine silver plate in Cuzco is incrusted with different-colored bits of shell (University Museum; Valcárcel, 1935 b, pp. 180–181), and a silver llama figurine in the American Museum of Natural History is incrusted with areas of lacquer separated by gold wires (cloisonné). An *Inca* ax in Madrid is of bronze inlaid with silver, and two bronze TOMI knives in Paris have similar inlay in the handles (Lothrop, 1938, pp. 14–15; Musée d'Ethnographie du Trocadero, 1933, Nos. 354, 355).

Copper and bronze tools were replaced by Spanish iron ones soon after the Conquest, and, by the time the chroniclers described native techniques of metalworking, processes like casting, which were applied primarily to bronze, had gone out of use. Cobo, for example says that the native smiths used only hammering in their gold and silver work, and got the false impression that the same had been true in ancient times (1890–95, bk. 14, ch. 15). The data from the chroniclers on metalworking have been admirably summarized by Lothrop (1938, pp. 11–17, using Cobo, Garcilaso, 1723, pt. 1, bk. 2, ch. 28, and Benzoni).

Gold and silver were used almost entirely for luxury articles and ceremonial objects. Bangles and sequins to be sewn onto clothing, tupu (TOPO) pins for fastening women's garments, plates to be hung around the neck, and figurines representing men, women, llamas, and alpacas were found at the *Inca* shrine of Titicaca on the island of that name (Bandelier, 1910, pls. 57, 58, 78). Cups shaped like the wooden ones (QIRO), earplugs, larger statues, and a variety of ornaments for litters and costume are mentioned by the chroniclers. Certain walls of the Temple of the Sun in Cuzco had gold bands across them (Rowe, 1944 and references). Lists of gold and silver objects taken by the Spaniards at the time of the Conquest give an excellent idea of the variety of objects made and the ingenuity of the *Inca* craftsmen (Lothrop, 1938).

Copper and bronze were used occasionally for the same purposes; figurines, pins, and cups of these metals are not uncommon. (See Bandelier, 1910, pls. 32, 66.) More commonly, however, they were used for tools (pl. 78): axes, chisels, knives, crowbars, bolas weights, war-club heads, mirrors, tweezers, needles, and bells. A great variety of these implements were found at Machu Picchu (Bingham, 1930, figs. 137–169). The axes are flat with two ears on the base for fastening the head to the handle. Knives are usually of the type called TOMI, with a handle perpendicular to the blade like the metal part of one of our chopping knives.

Stoneworking.—*Inca* methods for working and handling building stone have been described (p. 222 under Architecture). The same processes (hammering with stone hammers and polishing with sand and water) were used to produce a variety of smaller objects: axes, war-club heads, bolas stones, clod crushers, mortars and pestles, mills, ceremonial dishes, figurines, and amulets. The stone axes and war-club heads are shaped as nearly like the metal ones as the material permitted, and it is difficult to tell which was the prototype of the other. Most of the figurines represent llamas or alpacas, and have a cup-shaped hollow in the back that could be filled with llama fat or coca when used as an offering. These figurines are usually of stones selected for their fine texture, grain, and color, and the workmanship and artistic feeling is very fine. The University Museum, Cuzco, has a large collection. (Valcárcel, 1935 c, pp. 26–27; see also Musée d'Ethnographie du Trocadero, 1933, pl. 15, 16.)

The *Inca* made a variety of round and rectangular stone dishes, (pl. 79, *g*), some beautifully finished and decorated with designs in relief (Bingham, 1930, figs. 187, 197–199). These were probably used in sacrifices, perhaps to catch the blood of the sacrificed animal. (Cf. Morúa, 1922–25, bk. 4, ch. 2; Poma, 1936, p. 880.) Stone was also used for milling stones and for mortars and pestles (p. 221).

Stone chipping was not extensively practiced, as the *Inca* used copper and bronze for most cutting tools. Two stone blades, apparently without secondary flaking, were, however, found at Machu Picchu (Bingham, 1930, figs. 206, 211), and Cobo mentions obsidian knives (1890–95, bk. 3, ch. 33). Ground-slate knives with a straight cutting edge and a curved back are common on Early *Inca* sites around Cuzco, and one was found at Machu Picchu (Bingham, 1930, fig. 205).

Bone and shell.—Bone was used for needles, spoons, weaving picks, spindle whorls, flutes, and beads and other ornamental purposes. Llama bones were probably the principal material. (Bingham, 1930, figs. 184, 185, and University Museum collection, Cuzco; Valcárcel, 1935 b, pp. 190–91.) A very elaborate human figurine made by gluing small pieces of bone together was found in the 1934 excavations at Sacsahuaman (University Museum, Cuzco).

Shell was used for beads and was cut into small human and animal figurines, either for jewelry or as offerings. A silver dish in Cuzco shows skillful shell inlay.

Fire making.—Fire was made by rubbing two sticks together (Calancha, 1638, bk. 4, ch. 13). The sticks were called *uyaca [14a] (González, 1608, p. 361). No details are given about the kind of wood used, the tinder, or the manner of holding the apparatus. Garcilaso says that fire for sacrifices was always made new. The priest wore a bracelet with a concave gold plate attached to it with which he concentrated the rays of the sun on a tuft of cotton (Garcilaso, 1723, pt. 1, bk. 6, ch. 22). Cobo says, however, that fire for sacrifice had to be taken from a brazier kept always burning near the Temple of the Sun (1890–95, bk. 13, ch. 22). Garcilaso's story is suspect, being entirely without historical or archeological support, but is not impossible.

Weapons.—See pages 274–278.

SOCIAL AND POLITICAL ORGANIZATION

Kinship system.—The chroniclers were far more interested in *Inca* administration work than in details of family and village organization, so that this section is based on much less definite evidence than some of the others. Nevertheless, careful comparison of a small number of scattered references to the subject permits reconstruction of the broad principles on which *Inca* society was based. The best point of departure is the *Inca* kinship system and the incest restrictions placed on marriage, the two aspects of the question treated most fully in the sources.

The kinship system is fully described in the great *Quechua* grammar of Diego González Holguín (González, 1607, ff. 96–99); it is logical and not remarkably complicated. There are separate words for father and for mother; a father distinguished his son and daughter, but a woman used a single term for her children, regardless of sex. The terms for brother and for sister vary according to the sex of the speaker, but there are no special terms for older and younger siblings. First cousins are called "brother" and "sister." Both paternal and maternal grandparents are called "grandfather" and "grandmother," and there is only one term for grandchild. The father's brother is called "father," and father's sister "aunt." Similarly, mother's sister is called "mother," mother's brother "uncle." The classificatory parents use the same terms for man's brother's children and woman's sister's children as the real parents, while the classificatory uncles and aunts call these children "nephew" and "niece." None of these terms is reciprocal.

[14a] An asterisk indicates the commonest Hispanicized form of the word it marks. (See p. 185.)

The conjugal relations are somewhat more complicated. A man uses the same term for his father-in-law and his brother-in-law, and the same term for his mother-in-law and her mother. He calls his sisters-in-law by the same term that his own parents and siblings use for his wife and her sisters. His parents call his father-in-law by the same term he does, and they call his mother-in-law "aunt"; both these terms are reciprocal. The terms used by a woman for her relatives by marriage do not correspond exactly to those used by the men. A woman uses the same term for her father-in-law and his father, and the same term for her mother-in-law and mother-in-law's mother. She calls her sister-in-law "aunt," or may use the same term a man uses to his mother-in-law. She uses the same term to the brother-in-law that her own parents and siblings use toward her husband and his brothers. There is a special word for "husband," but the only word for wife is "woman."

It will be readily noted that the primary basis of classification is sex, either of the speaker (as is the case of the brother class and conjugal relations) or of the person addressed. There is a clear emphasis on generations in the reckoning of descent, but the distinction is not important in naming conjugal relatives. The distinctions by the sex of the speaker or of the person addressed are so symmetrical that it would be difficult to imagine the system functioning in a society with rigid clan exogamy and descent in a single line, for there would be no way of distinguishing clan relatives and nonclan relatives. Cross-cousins are not distinguished from parallel-cousins by their own generation, but are carefully distinguished by the previous generation, and it should be noted that all cousins call each other brother and sister. The terms for brother-in-law and sister-in-law do not imply that their users practiced the levirate, but they would not be incompatible with such a practice.

Quechua Kinship Terms (González, 1607, pp. 96–98)

(1) Parent class:
YAYA—father, father's brother.
MAMA—mother, mother's sister.
CORI—father's son or father's brother's nephew.
OSOSI—father's daughter or father's brother's niece.
WAWA—mother's child or mother's sister's child.

(2) Brother class:
Wawqi—man's brother or male cousin.
Pana—man's sister or female cousin.
Nyanya—women's sister or female cousin.
Tora—woman's brother or male cousin.
(3) Grandfather class:
Maco—grandfather.
Paya—grandmother.
Haway—grandchild.
Wil'ka—great grandchild.
C'opolyo—great great grandchild.
(4) Uncle class:
*Caca—mother's brother or cousin (uncle).
Ipa—father's sister or cousin (aunt).
*Concha—nephew (of mother's brothers and cousins).
Molya—niece (of father's sisters and cousins).
(5) Conjugal terms:
*Caca—(uncle) used by son-in-law and his brothers and cousins to address his father-in-law, and his father-in-law's father. Also used between the father-in-law and the man's father, and reciprocally among all the brothers-in-law.
Ipa—(aunt) used between the mother-in-law and the man's mother, and by the wife addressing her sisters-in-law.
*Aqque—used by the son-in-law and his brothers and cousins to address his mother-in-law or her mother. Also used by the wife as an alternative to "ipa" in addressing her sisters-in-law. It may be used also by her own sisters and cousins, and is reciprocal.
*Quihuachi—used by the daughter-in-law and her sisters and cousins to address her father-in-law and his father.
*Quihuach—used by the daughter-in-law and her sisters and cousins to address her mother-in-law and mother-in-law's mother.
*Catay—used by the parents-in-law and their children and nephews to address the son-in-law. Used also by the wife and her brothers to address her husband's brothers and their parents.
*Khachun—used by parents-in-law and brothers and sisters-in-law to address the wife.
(6) Husband and wife:
Qosa—husband (qhari—man, as apposed to woman).
Warmi—wife ("woman").

Compound terms have been omitted from this table. González gives compound forms by which any possible degree of blood relationship can be distinguished. Many of the terms in this list are no longer used in *Quechua*, so that the modern kinship system is considerably simpler.

Marriage restrictions.—The marriage restrictions fit in well with the kinship system. They can be divided into prohibitions of marriage within certain grades of blood relationship and broader restrictions limiting the choice of husband or wife to certain social groups. Marriage was prohibited with all direct ancestors and direct descendants, uncles and aunts, and real brothers and sisters. Marriage with a first cousin was sanctioned if she were to become the principal wife, on the grounds that the cult of the common grandfather would be strengthened thereby. The nobles were allowed to marry their half-sisters. This exception to the general rule is not easy to explain. The chroniclers link it with the later emperors' custom of making one of their full sisters their principal wife, and assume that just as the Emperor was set above all human law, so his nobles were distinguished somewhat from their fellow men. This explanation may be the correct one. (Cobo, 1890–95, bk. 14, ch. 7; Acosta, 1940, bk. 6, ch. 18; Poma, 1936, p. 190.)

The social group which restricted marriage on a broader basis was the ayllu (AYLYO), a kinship group discussed below. Garcilaso says specifically that marriage outside the ayllu (parentela) was forbidden (1723, pt. 1, bk. 4, ch. 8), and Cobo lists a law which permits a man to elope with a girl without her father's consent, and suffer no penalty provided the girl went willingly and both parties belonged to the same village (1890–95, bk. 12, ch. 26).

In the *Inca* Empire, the number of a man's wives was an index of his wealth and prestige, and, because the women shared the agricultural work, extra wives also made life easier for the whole family. The ordinary taxpayer, however, was monogamous from necessity. The first wife became the principal one, with precedence over all subsequent ones; if she died, none of the secondary wives could take her place, although the husband was free to marry another principal wife. The *Inca* explained this as a means of preventing intrigue among the secondary wives. A widow could not remarry unless she were inherited by her husband's brother (the levirate). A son inherited his father's secondary wives who had not borne children. A man might also receive wives by gift from the Emperor or by capturing them in war. A man's foster-mother became his secondary wife when he married and remained so until he had paid off his obligation to her for rearing him (Cobo, 1890–95, bk. 14, ch. 7).

With marriage, a man acquired the status of a full adult and moved into his own house. The ties of ancestor worship kept married sons near their father, however, forming small extended family groups similar to those of the modern *Aymara*. The nobility worshiped several generations of dead ancestors, but the common people usually did not remember generations more remote than the dead grandfather, whom they worshiped (Cobo, 1890–95, bk. 13, ch. 10). The possession of the dried and wrapped body of the worshiped ancestor was the important link; so much so that if an unfriendly neighbor got possession of the body, the descendants were forced to obey his orders in order to keep up their worship (Anonymous Letter of 1571 (1848), p. 448). Extended families seem to have lived by preference in a common enclosure (KANCA) containing three to six houses, if we may judge from the plans of such *Inca* sites as Machu Picchu and Ollantaytambo (see p. 000).

The Ayllu.—In modern Indian society, a number of unrelated extended families living together in a restricted area and following certain common rules of crop rotation under more or less informal leaders is called an ayllu (AYLYO) or community. (See pp. 441, 483, and 539.) There is no doubt that some sort of social group corresponding to the modern ayllu existed in ancient times also, but its nature is not easy to establish. The earliest modern writers who dealt with *Inca* society (e. g., Bandelier, 1910) assumed that the ayllu was a clan, and attributed to it all the classical clan characteristics: matrilineal descent, exogamy, totemism, etc. Their conclusions have never been seriously questioned, and the modern summaries of Means (1925), Baudin (1928), Olson (1933), and Murdock (1934) repeat the old assumption without attempting to prove it. It is timely to reexamine the question in the light of the historical and ethnological evidence.

The original assumption that the ayllu was a regular clan goes back to the immediate followers of Lewis Morgan, who were eager to find clans in the history of all human societies as part of their hypothesis of social evolution, and who were compelled to rely on very fragmentary descriptions for the Andean area. At first, it was not even considered necessary to prove the point by references to the chroniclers, for it was universally believed, in the absence of village studies, that the modern ayllu was a clan, and that Andean Indian society had not changed greatly since the Spanish Conquest. The fallacy respecting the modern ayllu is amply demonstrated by the articles on the Modern *Quechua* and *Aymara* (this volume, pp. 441, 539) and did not entirely escape the notice of Bandelier, who made superficial studies of the *Aymara* in the 90's. Instead of questioning the whole clan theory, however, Bandelier concluded that the modern ayllu had merely lost the clan character which it had at an earlier stage in its history. In 1910, he said he had found proof for this belief, but the citations from the chroniclers produced to substantiate it are all capable of other interpretations (1910, pp. 84, 146).

Any attempt to establish the nature of the ancient ayllu by study of the chroniclers faces a serious difficulty in the looseness of *Quechua* terminology. The word ayllu is used in Spanish with several very different meanings: (1) The lineages of the *Inca* royal class, each composed of the direct descendants of an Emperor in the male line; (2) the social unit of several extended families with which we are now concerned; (3) occasionally, the moiety! The word ayllu seems to have been a general word for "kin-group" in *Quechua*, and its specific meaning was probably made clear by the context. It is quite important to sort out those references to the ayllu which specifically concern the social unit under consideration.

We shall examine in turn each of the aspects of the ayllu by which we desire to classify it: whether it was a kin or a local group; its functions in restricting marriage; the line of descent followed; and the presence or absence of totemic elements.

There is little doubt that the ayllu was, at least in theory, a kin group. Dictionary definitions and chroniclers' statements all indicate that, in all its uses, the word ayllu implied some sort of relationship which, though very remote or even mythical, must have been an important social bond. (See González, 1608; Toledo, 1940, pp. 158–192.) As to its functions in restricting marriage, we have already noted that the ayllu was theoretically endogamous. The only evidence cited to indicate ayllu exogamy is Viceroy Toledo's decree regulating the ayllu affiliation of children of inter-ayllu marriages (Bandelier, 1910, pp. 84, 146). The decree states that disputes had arisen when the father's ayllu refused to let the children go back to the mother's ayllu after the death of the father, and orders that the mother be allowed to take her children with her. Far from demonstrating ayllu exogamy as the standard practice, this decree indicates that, as late as 1570, marriage outside the ayllu was still so rare that no tradition was recognized to govern the affiliation of the children, and that the resulting disputes had reached Spanish courts.

The evidence for descent in the male line is overwhelming (RGI, 1881–97, 1: 100–101,188–9; Falcón, 1918, p. 147; Las Casas,1892, p. 21; Fernández, 1876, pt. 2, bk. 3, ch. 11; etc.) These citations all refer to the inheritance of public office, for, if marriages were arranged within the ayllu, it would obviously make no difference in which line ayllu affiliation was traced, and no rule was necessary. Rulers, however, married women from other communities for political reasons, and, in such cases, the children belonged to the father's family (Sarmiento, 1906, on the early *Inca*).

In order to classify the ayllu as a totemic group, it would be necessary to show that the ayllus had animal (or plant) names, or that the ayllu members had animal names; that they traced their descent from these animals and had some sort of ceremonial attitude toward them, such as not eating them or performing certain rites for their increase; that the animal was used as a symbol of the ayllu; or some combination of a substantial number of such traits.

Ayllus were ordinarily named for a place or a person, if we may judge from the small proportion of preserved ayllu names which are translatable; none seem to have been named after an animal. Individuals frequently bore animal names, but were just as often named or abstract qualities or given traditional names the meaning of which had been lost (like MAÑKO). Some *Inca* names are given below

(p. 284). Although there seems to have been some tendency to use names of prominent ancestors, the *Inca* had no system of family names, and no rigid rules for naming their children. Ayllus traced their origins to mythical ancestors—animals, persons, or natural objects—which were worshiped, but there is no evidence that the individual ancestor was identified with an animal species. For example, if an ayllu claimed descent from a parrot, it accorded parrots in general no special reverence. The meat of animals of the same species as the mythical ancestor was not taboo, and no rites were performed for its increase. That persons and natural objects as well as animals might be mythical ancestors suggests that animals played no predominant part in mythology (Molina of Cuzco, 1913, p. 119). An interesting example of the use of animals as symbols is that the *Inca* Emperors kept a sacred white llama (NAPA), which was in a sense a dynastic symbol. (See Religion, Ceremonial Calendar.) Two explanations were given of its origin: First, that it represented the first llama seen on the earth after the flood (Cobo, 1890–95, bk. 13, ch. 27), and second, that it was brought from the cave where the *Inca* originated by the mythical ancestor who was a person (Sarmiento, 1906). Neither explanation identifies the llama with the ancestor, and the *Inca* had no taboo whatever against eating llama meat.

To summarize, the *Inca* ayllu was a kin group with theoretical endogamy, with descent in the male line, and without totemism. It was, therefore, not a clan in the classical sense at all. There is no historical or ethnological evidence to support the theory that the social group from which the ayllu developed was, in some pre-historic era, a true clan.

The ayllu owned a definite territory, and each married couple cultivated as much of it as they needed for their support. Under the *Inca*, the family lots were redistributed every year to ensure equality of opportunity and a proper rotation of the crops, but it is not certain whether this practice existed before the *Inca* conquest (Acosta, 1940, bk. 6, ch. 15). Before the *Inca* conquest, the other ayllu members cultivated their chief's fields and probably also cultivated plots for the support of their local shrines. The *Inca* systematized this division of land by setting aside certain fields in each community for the support of the government and of the shrines (below, p. 265). In modern Indian society, certain relatives regularly exchange labor on a man for man, day by day, basis, a custom called AYNI in both *Quechua* and *Aymara* (see pp. 419, 543). The practice is mentioned by Garcilaso (1723, pt. 1, bk. 5, chs. 2 and 11), and González Holguín (1608, under *aynillamanta llamcapuni), so we may assume it is ancient, but neither writer gives details.

The ayllus of each province were grouped by the *Inca* Emperors into two or three sections (SAYA). In theory, the grouping was a dual one, and the two moieties were called "upper" and "lower." However, the fact that *Inca* practice did not wholly correspond to theory makes the use of the term "moiety" difficult, and the word is only used in this article when two sections are referred to. The dual division was certainly ancient in some parts of the Andean area. It is specifically mentioned for the *Chanca*, for instance (Sarmiento, 1906, ch. 26). As all our information about the moiety division concerns the form of it used in *Inca* administration, however, it is best described in the next section.

Age grades.—*Inca* society was also divided by age groups. *Quechua* contains a variety of descriptive words corresponding to our "baby," "child," "youth," "adult," and so forth, which are used today, and most of which are ancient. For purposes of census and tax assessment, the *Inca* made 12 standard age divisions which are variously named. Transition from one grade to another came not at a certain age, for the Indians kept no exact reckoning of their age, but with obvious changes in physical condition and usefulness. The most important age grade was that of able-bodied adults, which was entered at marriage and lasted as long as both parties could do a full day's work. The adult man was called HATOÑ RONA, PORIQ, or AWQA (warrior). Under the Empire, a man's age-grade classification was checked regularly by the census taker.[15]

Leadership patterns.—Before the *Inca* conquest, political units in the Andes were very small and varied greatly in character and organization. United tribes such as the *Chanca* controlled a wide area with many subject groups. Around Cuzco, individual ayllus acted independently, and the whole area was in a state of chronic war.[16]

There were two common leadership patterns, one based on personal prestige, the other on inheritance. Many communities recognized no leader except in time of emergency, when the warriors followed the the man who had proved himself outstanding in earlier campaigns. Such prestige leaders were called SINCI. The *Inca* are the best example of the other pattern: hereditary chiefs who enjoyed as much power as they could exercise without being deposed by their subjects. To exalt the hereditary principle as a symbol of civilized government, and to identify it with their own dynasty, the *Inca* claimed that it had not existed before their time, and many chroniclers repeated this claim. Actually, even quite close to Cuzco, the *Inca* had to fight a number of well-established dynasties, such as that of the *Ayamarca*, whose ruler was called Tocay Capac. (Levillier (1940, pp. 207–220) is a convenient collection of references.)

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[15] The different lists of age grades can be found in full in Santillan (1879, pp. 19–21), Castro (1936, p. 238), Señores (1904, p. 202), and Poma (1936, pp. 193–234). Means' translations (1925, p. 456) are based on bad textual reconstructions by Jiménez de la Espada, and should be used with caution.

[16] Although military alliances were a common expedient in the Andean area (the alliance between the *Chimu* king and Cajamarca is a good example), there is no evidence of formal confederations. The *Chimu* Kingdom was a feudal state; the valley of Chincha was ruled by hereditary chiefs; and the *Chanca* seem to have had prestige chiefs only. Neither the *Chincha* nor the *Chanca* had any political pattern which could fairly be called a "confederacy." (Cieza, 1554, bk. 1, ch. 74; Castro, 1936; Betanzos, 1880, ch. 6; Sarmiento, 1906, ch. 26; and compare Means, 1931, p. 237.)

POLITICAL ORGANIZATION

There is no strict division between this and the preceding section. As the *Inca* rule was based on the monarchial principle, it is proper to start with a discussion of the imperial office.

The Emperor.—The *Inca* Emperors were absolute rulers with power checked only by the influence of ancient custom and the fear of revolt. They not only ruled by divine right, but claimed lineal descent from the Sun and were worshiped as divine during their lifetimes. While the Emperor and his government were merciless toward their enemies and demanded an obedience which amounted to virtual slavery from their subjects, they were in theory obliged to care for their people in every sort of need and keep them comfortable and happy. This obligation is reflected in many of their laws and illustrated by a number of anecdotes. The unquestionable success of the system is due chiefly to a sincere effort by the Imperial Government to live up to its theoretical obligation. (See Cobo, 1890–95, bk. 12, ch. 26; Garcilaso, 1723, pt. 1, bk. 5, ch. 2; Cieza, 1880, bk. 2, ch. 65.)

Each Emperor kept a large harem of secondary wives in addition to to the principal wife (QOYA), who was in earlier times the daughter of some neighboring ruler, but, from the reign of Topa Inca, was always the Emperor's full sister. Consequently, each ruler had a very large number of offspring, all of whom enjoyed positions of respect and privilege. The descendants in the male line of each Emperor formed a royal ayllu, and were responsible for the upkeep of their royal ancestor's palace and the support of his cult. At the time of the Spanish Conquest, there were 11 royal ayllus in Cuzco, 6 in the Upper Moiety and 5 in the Lower. At the time of the Conquest, the "descendants of Manco Capac" in the male line must have numbered about 500. There were some 567 living descendants in 1603, after the massacres of the civil wars and the bad time in the early Colony (Garcilaso, 1723, pt. 1, bk. 9, ch. 40). The members of the Emperor's family formed a useful court circle of educated men trained in the imperial ideology, and interested in its perpetuation. The emperors chose their top administrators from this group when possible.

There was no detailed rule of succession to the Imperial stool which would function impersonally and predictably to designate the heir in any eventuality, and this lack was a great weakness to the Empire at the time of the Spanish invasion. Customarily, the Emperor chose the most competent of his sons by his principal wife and trained him for the inheritance. The weakness of this system became apparent with the death of Huayna Capac, who caught a sudden fever before he had publicly announced his heir, and named Huascar only on his deathbed under rather curious circumstances (Sarmiento, 1906, ch. 62). Atahuallpa, Huascar's half-brother, was able to claim that their father had divided his Empire between them, and, as no heir had been publicly designated in the old Emperor's lifetime, no one could be sure of the rights of the case.

The Emperor dressed much the same as his subjects, but his clothing was of especially fine quality, made for his use by the mama-kona (see p. 269), and he wore certain symbols of his office. His hair was cut short, and he wore very large earplugs. His simple headdress, the focus of as much reverent attention as any crown in Europe, consisted of a many-colored braid (lyawt'o) which was wound four or five times around his head and supported elaborate forehead ornaments, the most important of which was a fringe, some 4 inches (10 cm.) wide, of red tassels hanging from little gold tubes. The fringe was sometimes crowned by a stick about 6 inches (15 cm.) long with a tassel pompon on the end, and three feathers rising from the pompon. A similar but larger ornament was carried on a lance. Members of the privileged class of "big ears" (pakoyoq, orejones) were permitted to wear head bands and fringes similar to the Emperor's, but distinguished by their color. (Cobo, 1890–95, bk. 12, ch. 36; Garcilaso, 1723, pt. 1, bk. 1, chs. 22, 23; Poma, 1936, pp. 108, 242, 318; González, 1608; Xérez, 1917, p. 51; Estete, 1924, p. 27.)

The Emperor carried a mace, with a golden star-head and a handle about 23 inches (60 cm.) long; attendants carried two similar maces with long pole handles, as a color-guard for the royal standard. (Cobo, 1890–95, bk. 12, ch. 36; Toledo, 1940, p. 113; Sarmiento, 1906, ch. 42.) The royal standard was a small square cotton or wool pennant, probably not more than 16 inches (40 cm.) square. It was painted so as to stand out stiffly from its staff, and bore the arms of the reigning emperor. The ruler sat on a low stool, not over 8 inches (20 cm.) high, carved of red wood and covered with a fine cloth. Placed on a raised platform to form an elaborate judgment seat, the whole thing was called osno, "throne." (Cobo, 1890–95, bk. 12, ch. 36; Poma, 1936, pp. 14, 369, 398; González Holguín, 1608.)

The Emperor enjoyed a variety of honorific titles: Sapa iñka, "Unique Inca"; Qhapaq apo, "Emperor"; Intip cori, "Son of the Sun"; and Wakca khoyaq, "Lover of the Poor," being the chief ones (Garcilaso, 1723, pt. 1, bk. 1, chs. 24, 26). His principal wife was known as Qoya, "Empress," or Mamancik, "Our Mother." Young male members of the royal ayllus were called Awki, "Prince"; adult ones, Iñka; unmarried women, Nyost'a, "Princess"; and married women, Palya, "Lady" (Garcilaso, 1723, pt. 1, bk. 1, ch. 26; Sarmiento, 1906, ch. 29).

The Imperial office was attended by elaborate custom and ritual. The Emperor ate sitting on a stool, with the food in fine gold, silver, or pottery plates, set on a layer of small rushes on the floor in front of him. Serving women brought the plates and held them while he ate. All leftovers were saved and stored along with his used clothing to be burned ceremonially once a year by a special official. The royal bed consisted of a large cotton quilt spread on the ground and covered with woolen blankets. The Emperor traveled in a litter with a large following, and his dignity required him to travel as slowly as possible, preferably not more than 12 miles a day. His litter bearers came from the Province of Rucanas, and two or three hundred additional *Rucana* preceded the litter to clear the road and relieve the litter bearers. These men wore a special livery. Each Emperor built and furnished a new palace in Cuzco, for the palace of his predecessor became a shrine to the memory of its builder. (Cobo, 1890–95, bk. 12, ch. 36; Xérez, 1917, p. 56; Sancho, 1917 b, ch. 18; Estete, 1924, pp. 29–30; Cieza, 1880, bk. 2, ch. 20.)

Anyone seeking audience with the Emperor, no matter what his rank, had to remove his sandals and place a token burden on his back before entering the room where the Emperor was. The Emperor usually sat behind a screen, and only received visitors face to face as a token of great honor. We have a number of eye-witness descriptions of this ceremonial. (Estete, 1918, p. 102; 1924, p. 41; Pizarro, 1844, p. 302; Cieza, 1880, bk. 2, ch. 13; Polo, 1940, p. 146; Morúa, 1922–25, bk. 2, ch. 16; bk. 3, ch. 7.)

When a new Emperor was installed (fig. 23, *b*), the future ruler secluded himself in a house constructed especially for the occasion, and fasted after the *Inca* fashion for 3 days. At the end of the fast, he was crowned with the fringe (*mascapaycha) in a public ceremony, and each noble swore allegiance by making a gesture of obeisance to him with a light-colored feather. After this, a public feast lasted for several days. (Cobo, 1890–95, bk. 12, ch. 36; bk. 13, ch. 32; Sancho, 1917 b, bk. 2, ch. 12; Acosta, 1940, bk. 6, ch. 12; Xeréz, 1917, p. 112; Cieza, 1880, bk. 2, ch. 36; Morúa, 1922–25, bk. 2, ch. 16.)

When the Emperor died his ayllu arranged elaborate mourning and funeral rites, in which the whole Empire participated. The dead man's entrails were removed and placed in a special receptacle, and the body was carefully preserved, probably by drying with herbs. His favorite women and most necessary servants were expected to volunteer to accompany him, and were made drunk during a great public dance and strangled. There were special mourning songs and pilgrimages to the places he had frequented (Cobo, 1890–95, bk. 14, ch. 19; Cieza, 1880, bk. 2, chs. 32, 60). The carefully wrapped body was deposited in the deceased's palace under the care of his descendants, and was brought out into the sacred square during public ceremonials. In the palace, the dead Emperor was waited on as in life, even to the extent of having women with fans standing on both sides of the bundle to shoo off the flies (Anonymous Conqueror, 1929, f. 5b). The bodies of the *Inca* Emperors were all found by Polo de Ondegardo in 1559 during his campaign to stamp out *Inca* religion (Acosta, 1940, bk. 6, ch. 21; Sarmiento, 1906, chs. 14, 15–62).

Nobility.—In theory, the execution of the Emperor's will was entrusted to members of a hereditary aristocracy which was still in the process of formation at the time of the Spanish Conquest. The *Inca* Empire expanded in one short generation from a small, compact and relatively homogeneous state to a size and diversity never equaled in aboriginal America. It included many areas which had never had an organized government within the memory of local tradition, and consequently were not prepared to furnish trained officials even for their own government. The problem of finding men to fill the thousands of new administrative posts created in the conquered territories was colossal, and Pachacuti and Topa Inca had to comb the country for talent. It was an unprecedented moment, when suddenly any man, no matter how humble his origin, who showed the slightest spark of administrative ability, might find himself set down in a strange village miles from his home, and told to enforce the Emperor's law there, with the certainty of rapid promotion if he succeeded. Many such men testified in their old age in the great inquiry into *Inca* customs made in 1571–72, and their brief autobiographies throw more light on the workings of *Inca* administration than volumes of general commentary (Toledo, 1940).

However, the Emperors seem to have had no intention of filling their administrative posts only on the basis of ability. Their political models were the rigidly aristocratic Coastal states, of which the *Chimu* Kingdom was the most imposing, where the hereditary difference between nobles and commons was so wide that the two classes were believed to have resulted from separate creations (Calancha, 1638, bk. 3, ch. 2, p. 554). Consequently, the *Inca* rulers tried to make their own administrative posts hereditary as soon as possible, and eventually surrounded themselves with a permanent aristocracy of the *Chimu* type. Where they found a responsible local ruler in power, they confirmed his position, taking his children to Cuzco to be brought up in the *Inca* idea and sent back to succeed him. When one of their own appointees died, his eldest son by his principal wife, or another son if the eldest were incompetent, was appointed in his place, so that the office might become hereditary in the family. The system was still in a transitional stage when the Spaniards arrived. (Cobo, 1890–95, bk. 12, ch. 25; Falcón, 1918, p. 147; Garcilaso, 1723, pt. 1, bk. 4, ch. 10.)

The new *Inca* aristocracy consisted of two classes, usually called "Inca class" and "curaca class" by the chroniclers. The Inca class consisted of the members of the 11 royal ayllus, who were Incas by blood, and a larger group of Incas by privilege formed by Pachacuti. This great organizer found the small group of Incas by blood insufficient as an instrument of administration, and he extended Inca privileges to all the inhabitants of the Empire who spoke *Quechua* as their native language and so would be useful in his program for the linguistic unification of his dominions. The Incas by privilege included all the tribes from Quiquijana in the Vilcanota Valley (the *Caviña*) to Abancay beyond the Apurimac (the *Quechua*): *Anta, Tampo, Quehuar, Huaroc, Quilliscache, Lare, Masca, Aco, Chillque, Yanahuara, Mayo, Sanco, Equeco,* and probably others. (Poma, 1936, p. 337; Garcilaso, 1723, pt. 1, bk. 1, ch. 23; Pachacuti, 1879, p. 318.) Many of them were settled in distant parts of the Empire as colonists, and they are generally called simply "Incas" by the chroniclers. Those who remained near Cuzco were organized into 10 ayllus, few of whose names correspond to those of the tribes (the list of ayllus is given in Sarmiento, 1906, ch. 11). Five of these ayllus belonged to the Upper Cuzco moiety and five to the Lower. All members of the Inca class were entitled to wear variants of the head band and braid and very large earplugs, which gave them the nickname of PAKOYOQ (literally, "earplug man"), or "orejones" (big ears). They formed the highest nobility and filled the most responsible positions in the Empire.

The curaca class, or lower nobility, included all administrative officials down to rulers of hundreds, with their descendants. Formerly, independent rulers who had been conquered by the *Inca* were admitted to this class. Their title was KORAKA, "official," often rendered "cacique" in Spanish. Both classes of nobles were exempt from taxation and were supported by the income from the government fields. They were expected to make presents to the Emperor when visiting him, and were rewarded for outstanding service by special gifts, such as: Secondary wives picked from among the Chosen Women; luxury objects, such as fine cloth, featherwork, or gold and silver vessels, of the sort generally reserved for the Inca's use; YANA-KONA service (see p. 268); the privilege of using a litter or parasol or otherwise imitating the Emperor; llamas; or land. In accordance with the *Inca* principle that land belonged to a kin-group rather than to an individual, these special land grants did not imply proprietorship in the modern sense, but the right to the products of the land. The recipient could not dispose of the land, and, after his death, it remained the inalienable joint property of his descendants, and those of them who so desired worked it and divided the products. (Cobo, 1890–95, bk. 12, chs. 25, 27; Acosta, 1940, bk. 6, ch. 15; Anonymous Discurso, 1906, pp. 153–4; Falcón, 1918, pp. 146–7; RGI, 1881–97, 1: 98–9; Garcilaso, 1723, pt. 1, bk. 5, chs. 6, 15.)

Territorial divisions.—The two classes of the nobility were broken down into an elaborate administrative bureaucracy, the various ranks being classified according to the size and population of the territorial unit controlled. The whole Empire was divided administratively into four great quarters, each named after one of the provinces included in it. The dividing lines between the quarters ran approximately north-south and east-west, meeting in the city of Cuzco, the Imperial capital. The northwestern division was called Chinchasuyu (CINCA-SOYO), and included most of central and northern Perú and Ecuador. The southwest quarter was Cuntisuyu (KONTI-SOYO), and its boundaries cut the Coast roughly at Ica and Moquehua. On the slopes of the eastern forest was ANTI-SOYO, stretching an undetermined distance to the northwest and southeast. The largest quarter of all was Collasuyu (QOLYA-SOYO), including the Titicaca Basin, most of Bolivia, Highland Argentina, and the northern half of Chile. The whole Empire was called the Land of the Four Quarters (TAWANTIÑ-SOYO). The division into quarters seems to have been made by Pachacuti about 1460, when the Empire was not as long and narrow as it later became, so that the areas of the quarters were originally equal.

Each quarter was subdivided into provinces (WAMAÑ or WAMANI) (RGI, 1881–97, 1: 80, 105; Señores, 1904, pp. 201–2; Santillán, 1879, p. 17), many of them corresponding to the native states and tribal groups which the *Inca* found when they conquered the area. Where the original units were too small, the *Inca* grouped several into a single province, or added some small residual groups to larger neighboring nations. The provinces varied considerably in size and population. A capital city was established in each province to serve as the administrative and religious center. In it most of the Government buildings were constructed. Names of provincial capitals were formed with HATOÑ, "great": HATOÑ SORA, the provincial capital of the *Sora;* HATOÑ QOLYA, the provincial capital of the *Colla,* and so forth. The inhabitants of each province wore a distinctive headdress, usually a cord binding the hair or a woolen cap. (Cobo, 1890–95, bk. 12, ch. 24; Cieza, 1880, bk. 2, ch. 23; Las Casas, 1892, ch. 20.)

Each province was divided into two or three parts (SAYA). The ideal pattern was undoubtedly the dual (moiety) division found among the *Inca* themselves, and the divisions were known as Upper and Lower (HANAÑ-SAYA and HORIÑ-SAYA) (Cobo, 1890–95, bk. 12, ch. 24). The province of Yauyos we know was divided into two moieties only (RGI, 1881-97, 1: 66). However, in very populous provinces where a dual division would result in moieties containing more than 10,000 taxpayers each, three divisions were organized. For instance, Huanca province was divided into HANAÑ WAÑKA, HORIÑ WAÑKA, and SAWSA, and Rucanas was divided into Upper and Lower

Rucana and ANTAMARKA (RGI, 1881–97, 1: 79–82, 179–80, 197–213). The Upper Moiety had precedence over the Lower in public ceremonies. Representatives of the Upper Moiety sat in a long line on the right side, while the men of the Lower Moiety formed a line opposite them. The chief of the Lower Moiety was subordinate to that of the upper one. These divisions were also rivals in war and religion (Cobo, 1890–95, bk. 14, ch. 5; Matienzo, 1910, ch. 6).

The moieties and sections in turn were subdivided into ayllus of varying number and size. The *Rucana* section of ANTAMARKA contained 4 ayllus (RGI, 1881–97, 1: 198); the Upper and Lower Moieties of Cuzco contained 11 and 10 respectively. While most administrative ayllus were probably merely the old kin groups given an official place in the state structure, there is no doubt that the *Inca* regrouped the ayllus and even created new ones when the native divisions were too small or otherwise not adapted to the purposes of *Inca* administration. The transformation of the ayllu from a kinship group to a village group of independent families linked more by common residence than by descent already had a good start under the *Inca*. In this case, as in so much else, the Spaniards simply carried out *Inca* policies. (RGI, 1881–97, 1: 198; Toledo, 1940, pp. 185, 187).

Administrative officers.—Each territorial unit was ruled by a special official. The prefects of the four quarters were called APO, a term also used for army commanders. They lived in Cuzco, and formed a council of state with a secretary whose duty it was to report their deliberations to the Emperor and convey his wishes to the council. The councilors were chosen from the highest nobility, and were usually near relatives of the Emperor. Their posts were not hereditary. Each province was under an imperial governor (T'OQRIKOQ), usually an *Inca* noble, who had wide judicial powers as well as administrative responsibility. The officials under him were curacas, classified according to the number of taxpayers for whom they were responsible: HONO KORAKA, Chief of 10,000; PICQA-WARAÑQA KORAKA, Chief of 5,000; WARAÑQA, Chief of 1,000; PICQA-PACAKA KORAKA, Chief of 500; and PACAKA KORAKA, Chief of 100. These offices were hereditary, subject to the Emperor's approval. Below them were two ranks of foremen: PICQA-COÑKA KAMAYOQ and COÑKA KAMAYOQ, responsible for 50 and 10 taxpayers respectively. These foremen were appointed by their curacas, and the offices were not hereditary. (Cobo, 1890–95, bk. 12, ch. 25; Acosta, 1940, bk. 6, ch. 13; RGI, 1881–97, 1: 98–100; Falcón, 1918, pp. 146–7; Señores, 1904, pp. 200–202; Castro, 1936, p. 237; Santillán, 1879, pp. 17–18; Cieza, 1880, bks. 2, chs. 20, 23; Sarmiento, 1906, ch. 50, etc.)

These decimally organized ranks provided a scale against which to measure the relative importance of the curacas, irrespective of whether they ruled a section, an ayllu, or some subdivision of these groups. For instance, the ruler of the section of HANAÑ WAÑKA was classified as a HONO, because his section contained some 9,000 taxpayers. The designation of HONO does not imply that he ruled exactly 10,000 men; it is an approximation for purposes of classification (Toledo, 1940, p. 96; RGI, 1881–97, 1: 81–82). The rank of an ayllu head probably varied according to the size of his ayllu. It seems probable, for instance, that the curacas in charge of the four ayllus of the ANTAMARKA section of Rucanas held the rank of WARAÑQA KORAKA, or Chief of 1,000 (RGI, 1881–97, 1: 199). In other cases, the rank of an ayllu chief may have been higher or lower.[17]

The decimal classification of curacas and foremen was based on an exact head-count constantly corrected by the local officials and recorded in Cuzco for the information of the Imperial Government. It served also as the basis of taxation and service in the army, and must have been a powerful aid to Government efficiency. The system of 12 age grades mentioned in the previous section (p. 256) was used to break down the head-count in such a way that the Government had an exact report on the human resources of any province. The foremen recorded all births, deaths, and changes of age grade within their jurisdiction to their superiors, and the totals were sent up to the Governor of the province, who embodied them in an annual report presented in Cuzco at the festival of RAYMI (December). The numbers were recorded by knots on colored strings, quipus (KHIPO) (p. 325).[18]

In addition to the regular administrative bureaucracy, there were officials for special activities. It seems likely that the Emperor sent out special inspectors, called TOKOYRIKOQ (literally, "he who sees all"), to check up on the regular governors and curacas, either openly or secretly. Unfortunately, the chroniclers and their modern editors seriously confused the *Quechua* words for governor and inspector [19] and their respective functions, but there seems to be little doubt that two different officials existed.[20]

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[17] I have been unable to find any reference in the chroniclers to support Means's statement (1925, p. 141; cf. Murdock, 1934, p. 415) that the *Inca* "standardized" the ayllu into a PACAKA (100 men), and the available evidence is clearly against it.

[18] Along with almost all *Inca* learning, which must have been considerable, the census totals are lost because no one committed them to paper after the Spanish Conquest. Approximate figures have been preserved for a few provinces (e.g., Yauyos, Huancas, Vilcas, and Soras; RGI, 1881–97, 1: 62, 81–2, 110, 170). The Indians in the Province of Rucanas said that the population had been greatest under Topa Inca, and had fallen off under Huayna Capac (RGI, 1881–97, 1: 181, 199). The preserved figures all refer to the number of able-bodied adult men; the ratio of adult men to the total population seems to have been about 1:5, if we may judge by the comparative figures available in 1586. (RGI, 1881–97, 1: 170, 181, 199. See also Cieza, 1880, bk. 2, ch. 19.)

[19] Governor, T'OQRIKOQ, is from a verb, T'OQRIY, "to govern," and inspector, TOKOY-RIKOQ from TOKOY, "all," and RIKOY, "look at." The derivation of either title from the other is impossible under the known rules of *Ouechua* word formation.

[20] (See González Holguín, 1608, under *ttocricuc; Cobo, 1890–95, bk. 12, ch. 25; Sarmiento, 1906, chs. 35, 52; Señores, 1904, p. 202; Falcón, 1918, p. 147; Matienzo, 1910, ch. 14; RGI, 1881–97, 1: 99–100; Santillán, 1879, p. 17; Cieza, 1880, bk. 2, ch. 18; Morúa, 1922–25, bk. 3, ch. 18.)

Agricultural taxation.—In the *Inca* Empire, all taxes were paid in labor; money was unknown, and no payments to the government were made in kind. The taxpayers were required to cultivate certain fields, the produce of which supported the Government and the *Inca* religion, and, in addition, to give a varying amount of time to service in the army, on public works, or in personal service to the Emperor and the nobility. The last obligation was called the MIT'A, or labor service. The cultivation of the reserved fields has been well described by Father Bernabé Cobo, the greatest man who has ever written about *Inca* customs (writing about 1653):

> When the Inca settled a town, or reduced one to obedience, he set up markers on its boundaries and divided the fields and arable land within its territory into three parts, in the following way. One part he assigned to Religion and the cult of his false gods, another he took for himself, and the third he left for the common use of the people. It has not been possible to determine whether these parts were equal in any town and province, but it is known that in many places the division was not equal, but depended on the quantity of available land and the density of the population. In some provinces, the part assigned to religion was greater; in others, that belonging to the Inca; and, in some regions, there were entire towns which, with their territory and all that it produced, belonged to the Sun and the other gods, like Arapa [in the Department of Puno] and others; in other provinces (and this was more usual), the king's share was the largest. In the lands assigned to Religion and to the Crown, the Inca kept overseers and administrators who took great care in supervising their cultivation, harvesting the products and putting them in the storehouses. The labor of sowing and cultivating these lands and harvesting their products formed a large part of the tribute which the taxpayer paid to the king. The boundaries of the lands and fields of each one of the divisions were so exact, and the care of the markers of the fields of the Inca and of religion, the responsibility of cultivating them first and at the proper season, and their protection against damage or loss so impressed upon the Indians that it was one of the most important religious duties that they had; so much so that no one dared to cross these fields without indicating his respect with special reverent phrases reserved for the purpose.
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> The lands dedicated to the gods were divided among the Sun, Lightning, and the other idols, shrines, and guacas [WAK'A] of general worship or restricted to the province or town; the amount belonging to each god and guaca was specified, and these fields were cultivated before the others that belonged to the Inca and the community. The people assembled to cultivate them in the following way. If the Inca himself, or his governor, or some high official happened to be present, he started the work with a golden taclla [TAKLYA] or plow, which they brought to the Inca, and, following his example, all the other officials and nobles who accompanied him did the same. However, the Inca soon stopped working, and after him the other officials and nobles stopped also, and sat down with the king to their banquets and festivals which were especially notable on such days.
>
> The common people remained at work, and with them only the curacas-pachacas [PACAKA-KORAKA], who worked a while longer than the nobles; thereafter they supervised the work, giving any orders that were necessary. The Hilacatas [HILAQATA, an *Aymara* name now applied to the head of an ayllu; here indicating probably some lower rank] and decurions in charge of ten subjects worked all day as did the ordinary Indians who had no official position. These divided the work they had to do by lines, each section being called a suyu [SOYO, division of any

kind], and, after the division, each man put into his section his children and wives and all the people of his house to help him. In this way, the man who had the most workers finished his suyu first, and he was considered a rich man; the poor man was he who had no one to help him in his work, and had to work that much longer. Each official or curaca followed the same system in his district; the most important man starting the work and soon leaving it, and the nobles following him according to their rank.

When the chacaras [CAKRA, "field"] of Religion were finished, the fields of the Inca were immediately sown, and, in their cultivation and harvest, the same order was followed. All members of the community who were present assembled, and with them the officials up to the most important chiefs and governors, dressed in their best and singing appropriate songs. When they cultivated the fields of Religion, their songs were in praise of their gods, and, when they cultivated the king's fields, in his praise.

The third division of the land according to the partition described above was assigned to the people in the nature of commons, it being understood that the land was the property of the Inca, and the community only had the usufruct. It cannot be determined whether this share was equal to the others or greater, but it is certain that sufficient lands were given to each province and town to support its population, and these lands were distributed each year among the subjects by the chief, not in equal parts, but proportionate to the number of children and relatives that each man had; and, as the family grew or decreased, its share was enlarged or restricted. No one was granted more than just enough to support him, be he noble or citizen, even though a great deal of land was left over to lie fallow and uncultivated, and this annual division is practiced to this day in the province of the Collao and elsewhere, and I have been present when it was done in the Province of Chucuito [see The Aymara, pp. 514, 546 in this volume].

When it was time to sow or cultivate the fields, all other tasks stopped, so that all the taxpayers might assemble to take part, and, if it was necessary for someone to do something else in an emergency, like war or some other urgent matter, the other Indians of the community worked the fields of the absent man without asking or receiving any compensation beyond their food, and, this done, each cultivated his own fields. This assistance which the community rendered to its absent members caused each man to return home willingly when he had finished his job, for he might find on his return after long absence that a harvest which he had neither sown nor reaped was gathered into his house. [Cobo, 1890–95, bk. 12, ch. 28; see also Falcón, 1918, p. 152; Garcilaso, 1723, pt. 1, bk. 5, ch. 15.]

There is little to be added to Father Cobo's account. The share of land assigned to the community was divided into lots called TOPO, each sufficient to support a taxpayer and his wife. Additional grants were made for the children (Garcilaso, 1723, pt. 1, bk. 5, ch. 3; Sarmiento, 1906, ch. 52). Although the chroniclers do not say so, it is very possible that the yearly distribution of land was to enforce the proper rotation of crops. This seems to have been the case in the Province of *Lupaca*.

The Government maintained two sets of storehouses in each district, one for the products of its own fields and the other for those of religion. Another set of storehouses was built at the provincial capital and there were more at Cuzco in which the products of the provinces could be concentrated. The storehouses, built on dry hillsides, consisted of rows of small square buildings with thatched roofs, separated from each other by 6 to 9 feet (2 to 3 m.) as protection against fire (Cobo, 1890–95, bk. 12, ch. 30). The stores were drawn upon as needed, those of religion being used for sacrifices, ceremonies, and the support of the numerous priesthood, and those of the Government for the army, the nobility, men working in the labor service, and all persons who did not pay taxes—the aged and infirm, widows, special craftsmen, and Government servants. The curacas were authorized to draw upon the Government stores in case of famine or disaster, and distribute whatever was needed to the people, so that the surplus provided a sort of Government insurance against crop failure. In addition, whenever the stocks were sufficiently large, the Emperor ordered a general distribution from the Government storehouses, usually sending the products of one province to another which, because of climatic differences, did not produce them. This distribution had nothing to do with need, and simply served to gratify the people and make more room in the storehouses. (Cobo, 1890–95, bk. 12, ch. 30; Falcón, 1918, p. 153; Cieza, 1880, bk. 2, ch. 12.)

Exactly parallel to the system of tax collection in agriculture was that applied to the llama and alpaca breeding districts. The pasture land was divided into three parts. The herds were also divided, those of Government and religion being much larger than those belonging to the communities, probably because the animals were used chiefly for sacrifices and for wool destined for general distribution, both public functions. The ordinary taxpayer was allowed up to 10 animals, and nobles received proportionately more as gifts of the Emperor. Privately owned animals were never requisitioned or taxed. The wool from Government animals was stored and distributed to the taxpayers of the whole Empire in equal allotments, each sufficient to provide the family with clothing. No account was taken of individual need, and a man whose own llamas provided him sufficient wool received an allotment just the same (Cobo, 1890–95, bk. 12, ch. 29).

The mit'a.—The *Inca* taxpayer's second labor obligation was the MIT'A, or labor service. The Government required each taxpayer to perform a certain amount of work annually. The amount was limited only by the will of the Emperor. To keep the system running smoothly, however, sufficient men had to be left at home at all times to tend the fields and flocks. Labor levies were made through the decimal classification of officials. If a thousand men were needed from the territory of a HONO, each chief of 10 was required to furnish one to his chief of 50; the chief of 50 passed them up to the chief of 100, and so on. A burden of any size could be equitably and quickly distributed over a district by this method. The labor service supplied recruits to the army, post service on the Imperial roads, personal service for the nobles (usually at the rate of one servant for every 10 men ruled), and labor for the mines and public works. Thirty thousand men at a time are said to have worked in the construction of the Sacsahuaman fortress, which was probably the greatest single construction job undertaken by the *Inca*. The Government's metal needs were not very great, and mine labor was limited to short terms; some accounts say 1 month. There was sufficient labor available to permit frequent relief. Certain provinces with special labor obligations were exempt from the general MIT'A: The *Rucana* were trained litter-bearers; the *Chumpivilca* furnished dancers for the court; and the *Chicha* manufactured specially carved firewood logs of resinous wood and brought them to Cuzco to be used for sacrifices. One of the greatest tributes to the efficiency of the system is that the Emperors had to make unnecessary work in order to keep the MIT'A levies busy. Huayna Capac is said to have ordered a hill moved from one place to another merely for want of a more useful project. Whether the story is true or not, the Indians who remembered *Inca* times evidently regarded it as perfectly plausible (Cieza, 1880, bk. 2, ch. 64; Morúa, 1922–25, bk. 3, ch. 18). The Emperors knew that people with excess leisure had too much time to criticize the Government, and they had trouble enough with revolts even when the people were busy (Cobo, 1890–95, bk. 12, chs. 33-35; Garcilaso, 1723, pt. 1, bk. 5, chs. 11, 16).

Tax-exempt classes.—The MIT'A provided the necessary labor for most Government jobs not filled by the nobility, but a few jobs requiring special training and continuity could not be filled from the MIT'A: accounting, metalworking, tapestry production, and other luxury handicrafts. Such positions were filled by a class of hereditary Government servants who were exempt from ordinary tribute and supported out of the Government storehouses. Government officials picked boys who showed special ability from among the sons of tribute payers, and the work was honorable and not excessively burdensome. Some of the Government servants were called YANA-KONA ("servants"), and in Colonial times the name was employed for all Indians who were not taxpayers (see p. 377). The original YANA-KONA are said to have been created by Topa Inca to punish the natives of a rebellious province (Sarmiento, 1906, ch. 51). The chroniclers' use of the words seems to imply that the YANA-KONA proper performed only the less-skilled jobs, and that the craftsmen were known by their professional titles: accountant (KHIPO-KAMAYOQ); silversmith (QOLQI-KAMAYOQ); tapestry weaver (QOMPI-KAMAYOQ); etc. The craftsmen manufactured only for the Emperor, who distributed the surplus as gifts to the nobility. All taxpayers made their own clothing and tools at home with locally gathered materials or wool distributed by the Government. (Cobo, 1890–95, bk. 14, ch. 15; Falcón, 1918, pp. 149–151; Poma, 1936, p. 191; Señores, 1904, p. 203; Castro, 1936, pp. 239, 245; Cieza, 1880, bk. 2, ch. 18.)

The *Inca* Government controlled its women subjects as arbitrarily as its men. An Imperial official called *apopanaca visited each village and classified all girls at about the age of 10. Girls selected for outstanding beauty and physical perfection (AKLYA-KONA, "chosen women") were educated by the Government. Those rejected (HAWASIPAS-KONA, "left-out girls") remained in the villages to marry the sons of the taxpayers. Village betrothals were publicly solemnized by the curaca; the marriageable boys and girls were assembled in the square in two lines, and the curaca gave a girl to each boy in the name of the Emperor. (See Life Cycle.)

The Chosen Women were organized in convents in the provincial capitals, and newly chosen girls spent about 4 years in one of these convents learning spinning and weaving, cooking, the manufacture of chicha, and other household occupations. Then they were reclassified; some as MAMA-KONA ("mothers"), and some to be given as principal or secondary wives to deserving nobles or warriors. Some MAMA-KONA were dedicated to the service of the Sun and the shrines in perpetual chastity (whence their popular title in modern literature, "Virgins of the Sun"); these prepared special foods and chicha for sacrifice and use in festivals, and tended the shrines. Others were concubines of the Emperor, and prepared his food and made his clothing.

When the Chosen Women were first designated at the age of about 10, some were set aside to be sacrificed on special occasions; they were considered especially fortunate, as they were assured of a life of ease and happiness in the other world. (Cobo, 1890–95, bk. 12, ch. 34; Señores, 1904, pp. 203, 206; Anonymous Discurso, 1906, p. 153; RGI, 1881–97, 1: 100, 681, 189; Garcilaso, 1723, pt. 1, bk. 4, chs. 1–8; Valera, 1879, pp. 178–189.)

Colonization.—One of the most famous of *Inca* administrative policies was the resettlement or colonization program. The principle behind it was that by reshuffling the population older political units would be broken and it would be more difficult for the inhabitants of a province to plot revolt. When a new province was conquered, settlers were brought into it from some province which had been under *Inca* government long enough to know the system, and their place was filled with the most recalcitrant elements of the new province. These settlers were called mitimaes (MITMA-KONA, usually Hispanicized as mitimaes; singular, mitima. See Acosta, 1940, bk. 6, ch. 12). The new colonists were under the authority of the officials of the province to which they moved, although they kept their own customs and distinctive headdress and were never really united with the old population. Loyal settlers sent to colonize a newly conquered province were charged with setting an example to the original inhabitants, spreading the use of *Quechua*, and acting as an *Inca* garrison; in return, they received women and honors as special signs of Imperial favor.

Similar in some ways to the imperial colonies were the *Aymara* settlements in the Coast valleys and on the eastern mountain slopes. The Emperor assigned certain fields in the lower, warmer country to each province of the Titicaca Basin and the Bolivian altiplano, so that the mountaineers could have their own source of the subtropical fruits. The *Aymara* sent colonists to care for these lowland fields. These colonists did not pass under the jurisdiction of the local officials, but remained subject to the Highland governors. (Cobo 1890–95, bk. 12, ch. 23; Señores, 1904, p. 203; Garcilaso, 1723, pt. 1, bk. 7, ch. 1; Cieza, 1880, bk. 2, chs. 17, 22; Sarmiento, 1906, ch. 39.)

The scale and the effect of the *Inca* colonization program have not been fully recognized. In many provinces, the colonists outnumbered the natives at the time of the Spanish Conquest (RGI, 1881–97, 1: 96). In Angaraes, 13½ of 22 towns established by Viceroy Toledo were inhabited by native *Angará*; the rest included *Chanca*, settlers from Cajarmarca, *Quihuar* from Cuzco, and *Huaro* from Huarochiri in Yauyos (RGI, 1881–97, 1: 142–144). Yamparaes had three towns of natives and five of colonists, including *Inca*, *Yanahuara*, *Canchi*, *Colla*, *Chicha*, and *Cañari*, the last from Ecuador (Calancha, 1638, bk. 2, ch. 40). These examples could be multiplied. The *Inca* around Cuzco furnished an unusual number of colonists, and were replaced by Indians from nearly every province in the Empire. (See especially the lists of witnesses in Toledo, 1940.)

Shuffling populations on this gigantic scale made the *Inca* Empire a regular melting pot, and there is no doubt that, even if the convulsions which the Spanish Conquest brought had not speeded up the process, the old tribal divisions would have entirely lost their significance in a couple of generations, and the heterogeneous population of the Empire would have become a single nation. The unification was speeded by the introduction of *Quechua* as the language for all official business. *Quechua* was already rapidly superseding the local languages when Spanish missionaries assured its future by adopting it as the official medium of evangelization.

Trade and travel.—Trade in the *Inca* Empire was purely local, and commerce a Government monopoly. The taxpayers of each district held small fairs to exchange their surplus products and unneeded objects received in Government distributions. No form of money was used in such exchanges. As the Government levied no property taxes, but required only labor, a thrifty and industrious family could accumulate considerable movable property, and diversify it through trade. The reservation of all precious metals and luxury objects to the use of the Emperor or to nobles designated by him prevented a wealthy family of taxpayers from using these prestige symbols.

Travel was restricted to Government business to keep the taxpayers on their land and to keep the roads free for official use. Through the MIT'A, the Emperor moved building stone, balsa wood, tropical products, and luxuries throughout the Empire as needed.

Crime and punishment.—*Inca* law severely penalized crimes which we would consider minor, on the principle that the act of breaking any law was disobedience to the Emperor, and hence to be classed with treason and sacrilege. The usual punishments were public rebuke, the HIWAYA, exile to the coca plantations, loss of office, torture, and death. The HIWAYA consisted in dropping a stone on a man's back from a height of nearly 3 feet, often killing him. Death was inflicted by stoning, hanging by the feet, throwing from a cliff, or simply beating the head in with a club. Imprisonment, really a specialized form of execution, was inflicted only for the worst forms of treason. The prisoner was committed to a subterranean dungeon in Cuzco filled with carnivorous animals and snakes, where he had small chance of surviving. Accused persons awaiting trial were held under guard. *Inca* law distinguished crimes involving nobles from those concerning the common people. It held that public ridicule and loss of office hurt a noble as much as exile or torture would a poor man, and that the prestige of the nobles as a class must be upheld. The latter principle might impose a more severe penalty on a noble: adultery among common people, for instance, was punished with torture, but if the woman were a noble, both parties were executed.

In judging a crime, all the attendant circumstances were taken into account. For instance, the punishment for murder was death, except when it was committed in self-defense or against an adulterous wife. If a man stole food, he might be banished, but if he were in want, he was simply rebuked for laziness. Punishment for causing injuries was much lighter if the injury were proved unintentional. Crimes against the Government were punished with special severity. Stealing from the Imperial fields, burning bridges, and breaking into convents were all punishable by death. Curacas who put to death any of their subjects without official permission, regardless of the cause, received the HIWAYA penalty for the first offense and death for the second. In general, the laws were severe but reasonable, and rigid enforcement combined with the virtual absence of want made crimes extremely rare.

The inspectors, whose chief task was to bring dishonest officials to justice, were the only special judicial officers. Enforcement, trial, and punishment were carried out by the regular administrative officials who judged cases of an importance relative to the number of subjects they ruled. The death penalty was supposed to be imposed only by the Governor or the Emperor himself, so all serious cases were taken to them. No appeal was permitted. Trials were conducted in the presence of all the witnesses, each of whom gave his account of the affair, and the accused was given an opportunity to defend himself. Judgment was pronounced immediately.[21]

Organization of conquered territory.—The steps taken to organize newly conquered territory reveal how the *Inca* administration functioned. When the generals had overcome armed resistance, a district was first surveyed and a census taken. The survey consisted in the construction of a series of relief models in clay, showing mountains and valleys, water supply, arable land, location of villages, and similar features. The census was a head-count of the whole population by age grades, recorded on the quipu. Models and census totals accompanied the general's report to Cuzco and were studied by the Emperor and his advisers, who then ordered a reorganization of the population. The native ayllus were moved down from the hilltop fortresses and settled in the plains near their fields, while very small ayllus and scattered families were concentrated in new villages. A provincial capital was chosen, usually the town which had been most important before the *Inca* conquest, and the necessary administrative and ceremonial buildings were erected. Then the most irreconcilable elements of the population were removed bodily to some distant province as mitimaes, while a corresponding number of natives was brought from the other province and settled in the new one. Often several small population exchanges were arranged with different provinces. The old chiefs of the new district were kept on in office and incorporated into the curaca class of nobility according to their importance. The Emperor made them presents and showed them as much favor as necessary to restore their prestige with their people. Their sons were taken as hostages to Cuzco to be taught the *Inca* system. An *Inca* governor was appointed, and vacancies in the administration filled with local people or specialists brought in from older provinces. The lands and flocks were divided and marked, storehouses were built, and the labor taxes introduced. If the province had suffered heavily during the conquest and the people had insufficient food and clothing, the Government distributed these things from its surplus in other provinces until the losses could be made up.

All Government persons were ordered to learn *Quechua*, and *Inca* prestige was so great that a fair proportion of the inhabitants eventually acquired it as a second language. *Inca* dress was introduced where it was not used, but the natives were ordered to continue to wear their local headdresses as a badge of tribal affiliation. The

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[21] The three most detailed accounts of *Inca* justice are found in Cobo (1890–95, bk. 12, ch. 26); Poma (1936, pp. 182–193, 301–314); and Valera (1879, pp. 198–205). Where there is any disagreement, I have followed Cobo. All three authors give extensive lists of *Inca* laws and the punishments they carried. See also Garcilaso, 1723, pt. 1, bk. 2, ch. 13, and bk. 4, chs. 11–15; Cieza, 1880, bk. 2, chs. 13, 23; RGI, 1881–97, 1:101–102; Pachacuti, 1879, p. 267.

Aymara-speaking Indians wore knitted woolen caps; elsewhere, a sling wound around the head or some equally simple ornament was the rule. The most sacred huacas (WAK'A, "shrine") of the tribe were taken to Cuzco, and set up under the care of priests sent to the capital for the purpose; they were worshiped when a provincial delegation visited the capital for any reason. The huacas served as additional hostages, and also gave the people a feeling that Cuzco was their capital and not just an *Inca* city. At the same time, the worship of Viracocha (WIRAQOCA), the Sun, the Thunder, and other *Inca* divinities was introduced into the new province.

Inca policy thus not only brought efficient administration and material well-being to the provinces, but unified the whole Empire. The unification was so carefully done that local nationalistic feelings were not aroused, and when a revolt did take place, the tribes were so scattered that it could hardly acquire the force of a national movement. One short century of *Inca* rule completely altered the course of Andean culture history. To this day, *Inca* provincial boundaries and names are widely used, and the *Inca* language flourishes, while even the memory of the older states and languages has vanished. (Cobo, 1890–95, bk. 12, chs. 23–24; Cieza, 1880, bk. 2, ch. 24; Garcilaso, 1723, pt. 1, bk. 2, ch. 26; Polo, 1916 b, pp. 52–71.)

Nature of the Inca Government.—The *Inca* Government was an unqualified despotism deriving its power in theory from the supernatural beings that watched over the Emperor, and in fact from the military force which he controlled. Its paternalistic concern for the material well-being of its subjects was admitted by the rulers themselves to be nothing but enlightened self-interest, for they realized that a healthy, happy people work better and produce more than one suffering from want and injustice. A number of the chroniclers have emphasized the contrast between *Inca* policy and Spanish Colonial policy, as to both theory and practice. The Spaniards pointed out that their rule brought the Indians a personal freedom in determination of residence, choice of wives, control of their children, and acquisition of goods which they had never had under the *Inca*. Actually, the Indians found that they had only exchanged a despotism of predictable demands and justice for another of limitless demands and justice reserved to their oppressors.

Whether or not the *Inca* system should be labeled as socialism depends entirely on the definition of socialism. Land was owned by the state, and its use granted to families, to kinship groups, and occasionally to individuals. Houses and movable property were individually owned, subject to no Government levy, and could be accumulated without other theoretical limitation than a prohibition against the use of luxury goods. The Government insured the individual against every sort of want, and, in return, demanded heavy tribute in labor, a very small part of which directly benefited the people who paid it.[22]

WARFARE

Before the rise of *Inca* power, when many Andean districts were split up into hostile villages, warfare was merely the expression of individual and group rivalries over good land, water rights, and flocks, or consisted of raids to plunder, avenge, or take women. War parties seemingly were informal groups led by interested persons or by warriors of proven ability. No doubt the larger, more settled states, especially on the Coast, had formally organized armies before the *Inca* conquest, but their existence can be inferred only from *Inca* military practice.

Motives for war.—It is difficult to determine the precise causes of the *Inca* wars and the exact motives for their tremendous expansion. Although the nobility gained more revenues and service from a successful conquest, it was already so well off that the economic motive cannot have been strong, and many of the conquered provinces were so poor that at first they were economic liabilities rather than assets. A much more powerful inducement was probably glory and personal advancement. War and religion were the two fields in which to gratify one's ambitions, and generations of raiding and feuds had left the Andean Indians with the feeling that fighting was the natural and proper occupation of any able-bodied man. A number of the *Inca* conquests, such as that of the *Pacasa*, seemingly were intended to stop outsiders from stirring up revolts, while others were planned principally to keep the *Inca* army occupied and prevent the generals from plotting against the succession. A large-scale campaign against the *Pasto* or *Chiriguano*, launched at the crucial moment after Huayna Capac's death, might have prevented the civil war between Huascar and Atahuallpa which left the Empire at the mercy of the Spaniards in 1532. (Compare Bram, 1941.)

Equipment.—By European standards, the *Inca* army was lightly armed, but it must have seemed formidable to most of the small Andean states. Its greatest weaknesses were lack of cavalry and siege engines and loose dicipline on the battle field. Its strength lay in its numbers, superb supply system, and effective close and long range weapons. Prisoners were not essential sacrificial victims, so that there was no special incentive to take the enemy alive. Military efficiency increased with the expansion of the Empire and might have improved further but for the Spanish Conquest.

For body armor, the soldiers wore quilted cotton tunics, or wound layers of cloth around their bodies. Most of the Spanish soldiers adopted quilt armor from the *Aztec* and *Inca*, regarding it as superior to European steel breastplates, at least against Indian weapons. *Inca* soldiers hung round shields of hard chonta-palm slats and cotton on their backs. Their heads were protected by quilted or wooden helmets or by caps of plaited cane (illustrated in Montell, 1929, fig. 21). They carried square or round shields (WAL'KAÑQA or POL'KAÑQA) on their arms, sometimes with a cloth apron hanging from the lower edge. The shields were made of narrow boards sheathed with deerskin with a decorative cloth or feather-cloth cover bearing the soldier's device in colors. Most of the devices were simple geometric patterns, without any known symbolic meaning. Instead of a shield, soldiers sometimes wrapped a long shawl once around the left arm to pad it against club blows; two long tails from it entangled the opponent's weapon. In attacking fortified positions, they used a great sheet of tough cloth which would cover about a hundred men as a protection against slingstones. (Cobo, 1890–95, bk. 14, ch. 9; Xérez, 1917, pp. 63–64; Poma, 1936, pp. 155, 161, 169, 171; Morúa, 1922–25, bk. 2, chs. 7, 10.)

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[22] Readers interested in theories of socialism should consult Baudin (1928 and 1942). The former includes a superb bibliography and can be used profitably as a guide to the mass of modern writings in French, German, and Spanish which treat the question of *Inca* "socialism."

Long-range weapons varied locally, but the *Inca* armies regularly used all of them. The mountain Indians used slings of plaited wool, rawhide, or vegetable fiber, about 7 to 24 inches (18 to 60 cm.) long when doubled, with a wider cradle or stone-rest in the middle and a finger loop at one end. With these, they threw stones the size of a hen's egg or larger with great accuracy. The sling was also used for hunting, in dances, and wound around the head to keep the hair in place. The bolas was used at somewhat closer range than the sling to entangle the enemy's feet, and, like the sling, it was also used in hunting. It consisted of two to five weights of stone, copper, or wood, varying from the size of a robin's egg to that of a fist, connected by cords fastened together in the middle. The weights were usually wrapped in bits of rawhide to which the cords were fastened.

The Coast Indians used spear throwers and darts with fire-hardened points. This weapon was used in the Highlands in Chanapata and Tiahuanaco times, but seems to have been entirely superseded there by the sling and bolas before the *Inca* rose to power. It survived on the Coast, however, and was brought back to Highland battlefields by the Coastal soldiers of the Emperor.[23] The bow and arrow were not used as weapons by the mountain Indians. Their modern use as toys may be simply in imitation of their use by Montaña tribes, whom the Highlanders love to mimic. However, there were words for bow and arrow in 16th-century *Quechua* (*picta and WACHI). The bowmen in the *Inca* army were all forest Indians, and their weapons were typical of the latter.

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[23] I have not been able to determine the *Quechua* name of the spear thrower. It is usually called "tiradera" or "amiento" by the chroniclers; "estólica" seems to be a more modern word. See Cobo, 1890–95, bk. 14, ch. 9; Las Casas, 1892, ch. 5.

A favorite device of Indians defending a hill fort or a mountain pass was to roll large boulders down on the advancing enemy (fig. 23, *c*), a trick which the Spaniards found very disconcerting. (Cobo, 1890–95, bk. 14, ch. 9; Xérez, 1917, pp. 63–64; Poma, 1936, pp. 155, 157, 161, 167; Morúa, 1922–25, bk. 1, ch. 22; bk. 2, ch. 6.)

The *Inca* fought hand to hand with a variety of clubs and spears. The favorite weapon of the *Inca* proper was a club with a circular stone, copper, gold, or silver head with six formidable projecting points. This kind of head, common in museum collections, is often called the "star-headed mace." The shafts seem to have averaged 3 feet (1 m.) long. Equally formidable was the macana (MAQANA) (fig. 29, *a*), a sword-shaped, double-edged war club, made of hard black chonta-palm wood, about 4 feet (1.2 m.) long, 4 inches (10 cm.) wide and tapering toward the handgrip. The hilt was rounded, and ended in a knob or pommel. Various kinds of battle axes and halberds were also used, having shafts of varying length and stone or bronze heads. The ax-heads were of the common Andean type with two ears on the back for hafting; the halberd heads had an ax blade on one side and the projections of the star-headed mace head on the others, or combined a blade and several sharp hooks similar to the heads of European halberds. The spears were long poles with fire-hardened points or copper or bronze tips. (Cobo, 1890–95, Morúa, 1922–25, and Xérez, 1917; Poma, 1936, pp. 100, 149, 151, 163, 165, 194.)

Soldiers wore the regular Andean costume except for the cloak. The headdress was replaced by a helmet, often ornamented by fringes running across the top from ear to ear. Fringes were also worn below the knees and at the ankles. Nearly all soldiers wore round metal plates, about 6 inches (15 cm.) in diameter, as chest and back ornaments. The plates (*canipu) were a kind of military decoration, the metal indicating the wearer's prowess; copper was the lowest award, gold the highest. Some soldiers painted their faces to frighten the enemy, but this practice seems to have been rare. *Inca* soldiers are often contrasted with forest Indians by their lack of face paint, especially in battle scenes on 16th-century lacquered wooden cups.[24]

The *Inca* were much addicted to martial music: songs insulting to the enemy, the noise of small tambourines (probably skin-covered), single-note shell and clay trumpets, and bone flutes (Morúa, 1922–25, bk. 2, ch. 1).

Each squadron had its standard, a small square banner about 8 inches (20 cm.) across, with the free vertical edge cut zigzag, and painted with the squadron device. These banners, perfectly stiff

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[24] Poma, 1936, pp. 157, 161; Morúa, 1922–25, bk. 2, ch. 6. Morúa adds that a soldier who killed an enemy painted one arm; when he killed a second, he painted his chest; and for the third, drew a black mark across his face between the ears (1922–25, bk. 2, ch. 7).

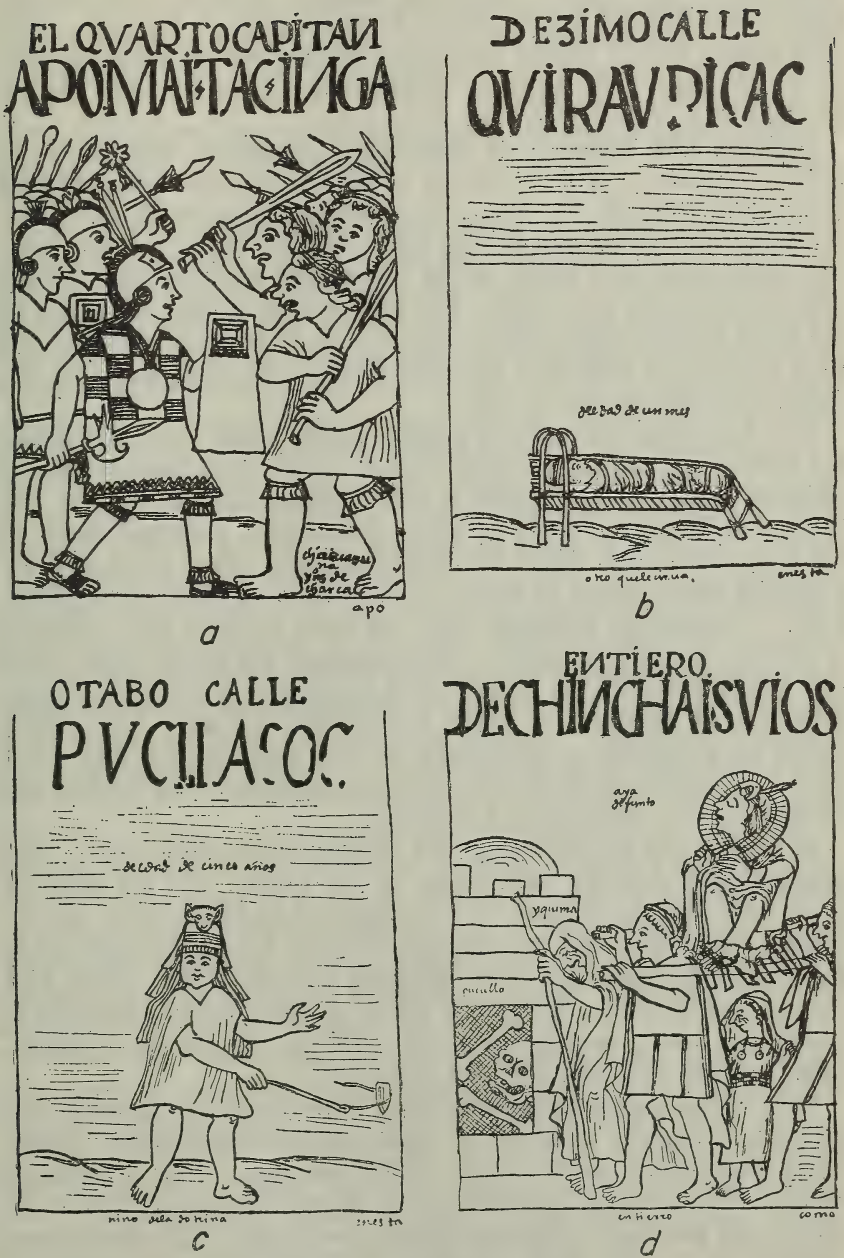
EL QVARTO CAPITAN
APO MAITA CINGA
chachacuyu ynga de charcas
apo
a
DEZIMO CALLE
QVIRAVRIÇAC
de edad de un mes
otro quelecirua
en esta
b
OTABO CALLE
PVCLLACOC
de edad de cinco años
niño dela dotrina
en esta
c
ENTIERO
DE CHINCHAISVIOS
aya difunto
yquma
cucullo
entierro
como
d

Figure 29.—Scenes of *Inca* life. *a*, Battle scene showing use of the swordlike club (maqana) and the "star-headed mace"; *b*, baby in cradle; *c*, child whipping a top; *d*, a dead man being carried to the family tomb in the Chinchasuyo. (After Guaman Poma, 1936, pp. 151, 212, 208, 289.)

with paint, were usually carried on spears. A large army usually carried one or more sacred objects to watch over its fortunes. The *Inca* armies usually carried the stone that represented Manco Capac, or his "brother," the stone of Huanacauri (Cobo, 1890–95, bk. 14, ch. 9; Morúa, 1922–25, bk. 3, ch. 6).

Training and tactics.—All able-bodied taxpayers were liable to military service, and were trained in the use of arms from boyhood (Las Casas, 1892, ch. 5). The only standing army seems to have been the Emperor's bodyguard of "big ears"; the rest of any military force was made up of men called up for the regular labor tax, and divided into squadrons by provinces. The officers were graded according to the same decimal classification used in the civil administration, and were probably in large part the same men (Cieza, 1880, bk. 2, ch. 23; Cobo, 1890–95, bk. 14, ch. 9).

The *Inca* army marched in regular ranks, under strict discipline. No soldier was allowed to stray from the road, steal food, or molest civilians, under pain of death (Cobo, 1890–95, bk. 12, chs. 26, 31; Molina of Santiago, 1916, p. 130). Atahuallpa punished some of his bodyguard with death for breaking ranks when frightened by a Spanish horse during an official visit (Anonymous Conqueror, 1929, f. 3). Comparable discipline does not seem to have been enforced in the heat of battle, however. Once engaged, the troops broke ranks and fought individually, depending on numbers and personal prowess. This lack of discipline in battle meant that the large *Inca* armies lacked an advantage proportionate to their numbers, for they could not be adequately controlled by their commanders. The conflict was accompanied by boasting and shouting.

In attack, the slingers began the engagement at long range. The bowmen held their fire until closer to the enemy, and the hand-to-hand fighters were the last to be engaged (Las Casas, 1892, ch. 5). Most soldiers used only one offensive weapon, but a man might wield a thrusting spear and one of the clubbing weapons. Men armed with the macana (MAOANA) carried no shield, keeping both hands free to handle the heavy sword-club (Cobo, 1890–95, bk. 14, ch. 9; Poma, 1936, pp. 151, 157, 161, 165, 169, 171, 194).

Most military operations were either pitched battles, in which *Inca* troops had superior numbers, or fights for fortified hilltops. Valley towns were never fortified and rarely defended. The inhabitants usually retired when attacked to a refuge (POKARA), ingeniously chosen and fortified, on the top of some nearby hill. The slopes were terraced to increase their steepness, multiple walls with staggered gates were built to defend the easiest access, and the walls had salients from which defending slingers could strike the backs of any scaling party. The *Inca's* masterpiece of fortification was the Sacsahuaman (SAQSAWAMAÑ) fortress overlooking Cuzco, which was begun by

Pachacuti after his victory over the *Chanca*. Many other impressive defense works are scattered throughout the Andean area. The forts of Parmunca and Huarco on the coast are famous, and less well-known Highland forts, like Huata, Mallajasi, and the little ones above Ollantaytambo, are almost equally impressive from a military point of view. (See Squier, 1877, pp. 493, 499; Rowe, 1944; Means, 1931, fig. 130.)

The greatest pitched battle ever fought by *Inca* armies before Pizarro's arrival was probably Huascar's last stand on the Apurimac against Atahuallpa's great generals, Quisquis and Challcuchima. The superior tactical skill of Atahuallpa's men brought overwhelming victory in spite of inferior numbers. Both armies used such tricks as burning the grass to drive the enemy out of a strong position, ambush in a ravine, and dawn attack against a force which believed itself secure. (See Sarmiento, 1906, chs. 64–65, and Pachacuti, 1879, pp. 318–321.) Cieza credits Inca Viracocha with heating a sling-stone red hot and hurling it across the Urubamba River to set fire to the thatched roofs of the town of Caytomarca (Cieza, 1880, bk. 2, ch. 39).

Prisoners, trophies, and honors.—The *Inca* took both prisoners and trophies. Captives were brought to Cuzco, where a few were sacrificed in thanksgiving for victory. After a particularly notable victory, the captives were led in triumphal procession through the streets of Cuzco, and the Emperor trod upon their necks in the temple of the Sun as a symbol of his power over them. Especially dangerous leaders were killed, usually by imprisonment in the dungeon of serpents (see p. 271), but most prisoners were sent home and treated as ordinary subjects. (Sarmiento, 1906, ch. 33; Betanzos, 1880, ch. 1; Cabello, ms., bk. 3, ch. 14.) The heads of important enemies killed in battle were taken as trophies, and fitted with a metal cup in the crown, drained through the mouth by a tube. The victor drank chicha from the trophy cup to recall the victory. One such head was shown to Pizarro's men by Atahuallpa (Poma, 1936, pp. 153, 194; Anonymous Conqueror, 1929, f. 5).

A more elaborate trophy was made by stuffing the enemy's skin with straw or ashes, and constructing a drum in the stomach, the skin of which served as the drumhead. (Cieza, 1880, bk. 2, ch. 46; Anonymous Discurso, 1906, p. 154; Poma, 1936, p. 334.) It seems likely that ordinary small war drums were also covered with human skin. The chroniclers usually referred to this treatment in a phrase such as, "He conquered him and made a drum of him." *Inca* soldiers generally made their flutes of an enemy's shin-bone (Means, 1931, p. 436). Warriors often made necklaces of enemies' teeth (Cobo, 1890–95, bk. 14, ch. 2).

The elaborate *Inca* system of military honors and rewards depended to such an extent on individual ability that military prowess was the chief way by which a common taxpayer could improve his social rank. Awards began with gifts of clothing and decorative gold and silver plates to be hung on the back or chest. The gift of a Chosen Woman was an especial mark of the Emperor's favor. Soldiers could keep women they captured in a campaign. Outstanding warriors could aspire to an official position in the administrative bureaucracy, and hand the office down to their descendants. Nobles who distinguished themselves were rewarded with wives, promotion, gifts, and special privileges, such as riding in a litter, carrying a parasol, or sitting on a stool.

All soldiers on active service were supported by the Government; their neighbors tilled their fields and military service inflicted no economic hardships (Cobo, 1890–95, bk. 14, ch. 9; Anonymous Discurso, 1906, pp. 153 ff.).

Transport.—Transport was a problem only beyond the frontiers of the Empire, as storehouses and camping places were so distributed along the main roads that a moving army found all necessary stores at the end of each day's march. These military storehouses supported both *Inca* armies throughout the civil war, and the Spanish troops used them for more than 10 years after the Conquest (Polo, 1917 a, p. 69). In fact, the existence of easy communications and full supplies probably expanded and prolonged the civil wars among the Spanish conquerors far beyond anything that would have taken place in an impoverished country where travel was difficult. Outside of the Empire, the supplies not found in the enemy's country were carried by llamas and men, and supplying the army became a serious problem.

Ceremonial aspects.—*Inca* warfare was deeply affected by religious beliefs and practices. From the time of Pachacuti, religion was used to justify the *Inca* conquest, on the pretext that the purest and highest form of religion was the *Inca* way of worshiping the Creator, the sky gods, and the place spirits, and that it was the *Inca's* duty to spread this religion throughout the world. It is difficult to state this claim without making it sound like an echo of crusading Christianity, but there is small doubt of its aboriginal character (Polo, 1940, p. 132).

Before going to war, the *Inca* held a ceremony to lessen the powers of the enemy idols (huacas) and to divine the outcome of the campaign. It began with the sacrifice of various wild birds, burned on a fire of thornwood. The priests walked around the fire holding stones on which snakes, toads, pumas, and jaguars had been painted, and chanting, "May it succeed" and "May the huacas of our enemies lose their strength." Then they sacrificed some dark-colored llamas which had been tied up for several days without food, and prayed, "as the hearts of these animals faint, so may those of our adversaries." Each llama heart was inspected to see if a lump of flesh near it had been consumed in the animal's enforced fast; if not, it was a bad sign. They also sacrificed black dogs, threw them on a flat place, and made certain people eat the meat. The same ceremony was used when it was feared that the Emperor would be attacked with poison. The participants fasted all day, and feasted at night. (Polo, 1916 a, bk. 14, ch. 2; Acosta, 1940, bk. 5, ch. 18; Morúa, 1922–25, bk. 3, ch. 53; Cobo, 1890–95, bk. 13, ch. 22.)

In warfare, as in all other activities, the *Inca* were entirely dependent on divination, no move being made without favorable auguries. During the war between Huascar and Atahuallpa, both sides consulted such famous oracles as Pachacamac and made immense sacrifices to gain the favor of the gods. During the siege of Cuzco by Inca Manco, the *Inca* army attacked repeatedly at the new moon, believing that to be the luckiest time. (See p. 383.)

Victory was usually attributed to divine aid. During the defense of Cuzco against the *Chanca*, Pachacuti cried out that even the stones were turning to men to help the *Inca*, and after the battle he pointed out a large number of loose stones on the battlefield which had done so. These stones were reverently collected and distributed around Cuzco as shrines (Acosta, 1940, bk. 6, ch. 21; Cobo, 1890–95, bk. 13, ch. 8). Certain images, especially those representing tribal ancestors, were regularly carried into battle by the *Inca* and their neighbors. The *Inca* usually carried the stones representing Manco Capac and Huanacauri. The presence of such images undoubtedly aided morale, and provided rallying points of great emotional value. The *Inca* leaders seem to have believed that Viracocha, the Creator, was the ultimate giver of victory, but the soldiers probably attributed it to the images they carried (Pachacuti, 1879, pp. 305–6).

Diplomacy.—The *Inca* made shrewd use of diplomacy in their campaigns. When they had decided to expand in a certain direction, they first sent envoys to the threatened tribes to invite them to submit peacefully. The envoys explained that the *Inca* had a divine mission to spread the true religion and that they were the great champions of civilization. Privileges and immunities were offered for willing submission and the overwhelming power of the Empire was emphasized. The notable success of the *Inca* Government in bringing greater prosperity to its subjects, and the privilege accorded to local rulers of holding hereditary positions at least equaling their rank as independent chiefs were weighty arguments in behalf of submission. A small tribe at odds with most of its neighbors had little chance of successful resistance to the *Inca* power. As a result, a great many tribes accepted the offer, and the *Inca* army marched in without a fight. The amazing speed of Topa Inca's conquests was due in large part to the success of his diplomacy. (Señores, 1904, p. 200; Anonymous Discurso, 1906, pp. 154–155; Cieza, 1880, bk. 2, ch. 17.)

LIFE CYCLE

Childbirth and infancy.—The chroniclers give few particulars about pregnancy. Children were a great economic asset in *Inca* society, and were probably greatly desired. Pregnant women were not supposed to walk in the fields, but otherwise their work was not interrupted (Cobo, 1890–95, bk. 13, ch. 38). Before bearing a child, a woman was supposed to confess and pray to the huacas for a successful birth. During the delivery, the husband and sometimes the woman fasted. Women who had borne twins often acted as midwives, but many women delivered unassisted. The midwives massaged the mother's abdomen to straighten the fetus, and could produce abortion. Immediately after birth, the mother took the baby to the nearest stream and washed both herself and it (Cobo, 1890–95, bk. 14, ch. 6).

On the fourth day after birth, the baby was put into a cradle where it was kept until old enough to walk (fig. 29, *b*). The cradle consisted of a board or slat back about the size of the baby, with four low feet. It was cushioned with a folded shawl, and the child was lightly tied to it. Two crossed hoops passed over the head, and another over the feet, so that a blanket could be thrown over the cradle without danger of suffocating the baby. The mother carried the cradle on her back wherever she went, supporting it with a shawl tied over her chest. Little care was taken to keep the cradle clean (Cobo, 1890–95, bk. 14, ch. 6; Poma, 1936, pp. 212, 233).

The child was not named until it was weaned, probably a year or two after birth. The name giving was part of an elaborate ceremony called *rutuchicoy, "hair cutting." Relatives and friends assembled for a feast, followed by dancing and drinking, after which, the child's oldest uncle cut its hair and nails, which were preserved with great care, and gave it a name. Then the uncle and other relatives gave it presents: silver garments, wool, etc. They prayed to the Sun that the child's life be fortunate and that he live to inherit from his father. The name given at the hair cutting was retained only until the person reached maturity. (Cobo, 1890–95, bk. 14, ch. 6; González, 1608; Molina of Cuzco, 1913, p. 176.)

Education.—Most children learned only by helping their parents, which they began to do almost as soon as they could walk. Formal instruction was reserved for the nobility and the Chosen Women. Some kind of elaborate instruction in the use of arms, the *Quechua* language, *Inca* religion, history, and the use of the quipus was given in Cuzco to the sons of provincial officials sent there to serve as hostages and learn *Inca* methods. Garcilaso (quoting Blas Valera) and Morúa) describe this *Inca* "school" as a 4-year course, the first year of which was devoted to the study of *Quechua*, the second to religion, the third to quipus, and the fourth to *Inca* history. The teachers were not allowed to beat the students more than once a day, and that punishment was restricted to 10 blows on the soles of the feet! (Garcilaso, 1723, pt. 1, bk. 4, ch. 19; Morúa, 1922–25, bk. 3, ch. 4.) Unfortunately, none of the other chroniclers refer to the methods of public instruction.

The Chosen Women were taught religion, spinning, weaving, cooking, and chicha-making at the convents to which they were sent when first selected, at about the age of 10. This instruction lasted for about 4 years, and prepared the girls to serve as MAMA-KONA (consecrated women), or as wives of nobles whom the Emperor wished to honor. (See p. 299. Cobo, 1890–95, bk. 13, ch. 37; Poma, 1936, p. 300.)

Maturity.—At the age of about 14, boys were given the breechclout and a new name in a ceremony called WARACIKOY, which was in a sense a puberty rite, although it coincided only approximately with physiological puberty. The WARACIKOY was held only once a year, and in Cuzco it coincided with the festival of QHAPAQ RAYMI in December. The rites were probably very simple for ordinary people, but boys of the royal family went through elaborate ceremonies lasting for several weeks.

Preparations for the royal WARACIKOY started in October when the boys' mothers began to make their costumes. In November, the candidates made a pilgrimage to Huanacauri to ask permission of the huaca to perform the ceremony. Each brought a llama for sacrifice, and the priests drew a line on the candidate's face with its blood, and gave the boy a sling. The boys then collected straw for their relatives to sit on during the coming festivities. In addition to performing various sacrifices and dances, the boys had to help chew the maize in preparing the great stores of chicha that would be consumed (Cobo, 1890–95, bk. 13, ch. 30).

The first part of the WARACIKOY proper consisted of another pilgrimage to Huanacauri and more llama sacrifices. On the return, the boys' relatives beat their legs with slings, exhorting them to be strong and brave. A dance called WARRI was then performed, followed by drinking and a 6-day rest. Then the boys dressed in fresh costumes and went out to the hill of Anahuarque, near Huanacauri, for a foot race. At Anahuarque, they repeated the sacrifices, beating, and dancing previously performed at Huanacauri. The race was from the top of the hill to the bottom, and its termination was marked by a group of girls of the noble class carrying chicha for the runners. Each runner was accompanied by an older man who was his sponsor and could help him in the race if he needed it. The "hill" of Anahuarque has not been certainly identified, but was probably about 2,000 feet (650 m.) high, and the race could well have taken an hour or so. Falls were frequent, and the runners were sometimes seriously hurt. Another excursion was made to the hills called SAWARAWRA and YAWIRA, where the candidates were given their breechclouts after more sacrifices. On another trip to the spring of Callispuquio, they were given their weapons. A boy's most important uncle gave him a shield, a sling, and a mace, and other relatives made him presents also, as well as much good advice about his duty as an *Inca*. At the end of the ceremony, the candidate's ears were pierced for earplugs, and he became a warrior. (Cobo, 1890–95, bk. 13, ch. 25; Molina of Cuzco, 1913, pp. 156–168; Garcilaso, 1723, pt. 1, bk. 6, chs. 24-27; Cieza, 1880, bk. 2, ch. 7; Pachacuti, 1879, pp. 249–250; Fernández, 1876, pt. 2, bk. 3, ch. 6.)

The girls' maturity ceremony, called *quicuchicuy, was held at their first menstruation, and consequently was an individual, rather than a collective annual affair like the boys' (Sarmiento, 1906, ch. 13). The girl fasted 3 days, eating nothing the first 2 days, and only a little raw maize the 3d day, and remaining shut up in the house. On the 4th day, her mother washed her and combed and braided her hair. She put on fine new clothes and white woolen sandals, and emerged to wait on her relatives, who had assembled for a feast. The most important uncle then gave her a permanent name, and all present gave her gifts (Cobo, 1890–95, bk. 14, ch. 6; Molina of Cuzco, 1913, pp. 176–177).

Inca names referred to animals the qualities of which were admired, and to natural objects, places, or abstract qualities. A man might be named for his father or grandfather, but there was no fixed rule for naming. He might acquire a nickname such as "weeper of blood," "stone-eye," etc. Usually, when an Indian is given several names in the chronicles, most of them are titles of rank (IÑKA, QHAPAQ, APO, etc.), but multiple names were not unknown, especially among the nobility; Huascar's given name was THOPA KOSI WAL'PA, Huascar (WASKHAR) being a nickname. The names of the emperors were often composed entirely of honorific titles (QHAPAQ YOPAÑKI, IÑKA PACAKOTI, etc.). MAÑKO, ROQ'A, and MAYTA have no known meanings. A few of the most common *Inca* names and titles with their meaning are: IÑKA, member of the *Inca* family or nation; APO, lord; QHAPAQ, powerful, wealthy; YOPAÑKI, honored; THOPA, royal; T'ITO, liberal; SINCI, strong; PACAKOTI, cataclysm; AMARO, dragon; KOSI, happy; SAYRI, tobacco; WAMAÑ, hawk; POMA, puma; KONTOR, condor (Andean vulture); QISPI, crystal; OTOROÑKO, jaguar. Women's names were similar: QOYLYOR, star; RONTO, egg; OQLYO, pure; CIMPO, mark; QORI, gold; KOKA, coca.

Marriage.—As stated (p. 257), the *Inca* recognized only one principal wife, although nobles and other privileged persons might have a number of secondary wives. Secondary wives were taken without special ceremony, but there was a regular form of marriage for the principal one

Marriages seem to have been arranged by the young couple with the consent of their parents, or by the parents. Under the *Inca* Empire, however, the couple were not engaged until the Governor assembled the marriageable boys in one row and the girls in another. Each boy in turn chose a girl and put her behind him. If two boys were rivals for a girl, the second boy made no choice when his turn came, and the Governor investigated the dispute and arbitrated. The loser then made a second choice. When all the couples had been satisfactorily paired off, the Governor ceremonially presented each girl to her future husband, giving the Emperor's blessing to the marriage. (Morúa, 1922–25, bk. 3, ch. 34; RGI, 1881–97, 1: 101; Cobo, 1890–95, bk. 14, ch. 7.)

Following the public betrothal, the two families arranged a wedding following the ancient tribal custom, which varied locally. Among the *Inca* proper, the groom and his family went to the home of the bride, whose family formally presented her to him. As acceptance, the groom put a sandal on her right foot, of wool if she was a virgin, otherwise of ICHO grass, and then took her by the hand. Both families then proceeded to the house of the groom, where the bride presented the groom with a fine wool tunic, a man's head band (LYAWT'O), and a flat metal ornament which she had brought stowed under her sash. The groom put these on, and then the couple's relatives lectured them on the duties of married life. Both families made them presents, and a feast closed the ceremony. In some provinces, the suitor served his prospective parents-in-law for 4 or 5 days before the wedding, bringing them wood and straw (Cobo, 1890–95, bk. 14, ch. 7; Molina of Cuzco, 1913, p. 177).

In some if not all districts a couple lived together for a time in a kind of trial marriage. References to the custom are numerous, but so vague that no further details of it are available. (Morúa, 1922–25, bk. 3, ch. 52; Arriaga, 1920, ch. 6; and see discussion and references in Romero, 1923 a, and Bandelier, 1910, p. 147.)

Divorce of the principal wife after the Government had sanctioned the marriage was theoretically impossible, but secondary wives could be divorced easily. Information on the subject is scanty (Cobo, 1890–95, bk. 14, ch. 7).

Ordinary citizens became fully mature only at marriage, when they set up their own households and became taxpayers (pp. 252, 265). Quite possibly, outside the *Inca* royal lineages the boys' maturity ceremony or its equivalent was of minor importance, and indicated only that the boy was ready for marriage, though he did not reach full social adulthood until he was married and became a taxpayer.

Death and burial.—At death, the relatives dressed immediately in black, and remained in mourning for some time, a full year among the nobles. Women cut their hair and wore their cloaks over their heads. The family served food and drink to everyone who attended the funeral. First, the mourners did a slow dance accompanied by drums and dirges, then part of the property left by the dead man was burned, and the body was wrapped and buried with the rest of his personal belongings. No fires were lighted in the house during the funeral. The funeral rites for nobles were similar but more elaborate and lasted longer. Processions were made to places that the dead man had frequented in life, and his virtues and achievements were celebrated in songs. Some of his wives and servants might be killed and buried with him. The funeral rites lasted for 8 days (see pp. 259–260). At intervals after the burial, the family visited the tomb and made fresh offerings of food, drink, and clothing (Cobo, 1890–95, bk. 14, ch. 19).

When a man's principal wife died, he might not remarry for a year, and wore a black cloak. Poor men often did not remarry for 2 years, and suffered severely meanwhile from the lack of household assistance, and because they were considered to be undergoing divine punishment for some secret sin. The principal wife had a more elaborate funeral than the secondary ones (Cobo, 1890–95, bk. 14, ch. 7).

No tombs of *Inca* nobles of the Cuzco region have ever been described, probably because most of them were looted long ago. Ordinary tombs are numerous and of several different types. In large rock shelters protected against the rain, the *Inca* built small beehive tombs of field stones laid in clay, with rough corbel vaulted roofs. These are square or round, free standing or built against the cliff, and vary in size and degree of finish, the finest being carefully plastered with fine mud. Each tomb has a small door, blocked with stones and clay at the funeral. Inside, the body was placed in a sitting position (fig. 29, *d*) with the knees drawn up to the chest, wrapped in cloth and mats or sewed into a skin. Such burials are usually accompanied by food, pottery, baskets, simple jewelry, and bone and metal tools. The dry air under the rock shelters preserves perishable objects as well as the dry sands of the Coastal deserts. The presence of several bodies in one tomb, without the rich offerings which would accompany a noble and his train, suggests that some tombs may have been family burial places. Such tombs are abundant in the lower Cuzco Valley, and along the Urubamba River from above Quiquijana down to Ollantaytambo.

At Machu Picchu, where the rainfall is heavy and caves are seldom dry, the dead were buried with their possessions under overhanging boulders (Eaton, 1916).[25] Morúa mentions cremation and the suttee (voluntary immolation of the widow) as Andean customs, but as far as I am aware, there is no other evidence for such practices (1922–25, bk. 3, ch. 34). Urn burial of infants, probably in the houses, was occasionally practiced at Cuzco, as attested by a find of *Inca* date at Coripata on the southwest side of town (University Museum, Cuzco).

ESTHETIC AND RECREATIONAL ACTIVITIES

Art.—The wealth and pageantry that characterized the *Inca* court created a greater demand for beautiful objects than had been the case in any previous period of Andean history, while the economic security which the *Inca* state provided the craftsmen similarly increased production. In spite of looting by the Spanish conquerors, the quantity of *Inca* artifacts which has survived is astounding. The very abundance of *Inca* material in the Andean region has led to interest in the rarer objects at the expense of the commonplace ones.

Inca objects consistently show certain qualities which reflect the new political and economic conditions and are in marked contrast to the products of earlier cultures. The first is a general high level of technical excellence, which involves few really new elements, but incorporates developments contributed by many conquered peoples: bronze tools and metal casting, accurate fitting of large, irregular blocks of stone, fine tapestry, lacquered wooden cups, and fine metal-hard pottery. Another notable quality of *Inca* art is the constant repetition of a few simple types, a mark of mass-production. The painted designs on *Inca* water jars, for instance, consist of simple elements repeated from jar to jar in the same order and so mechanically that they might almost be machine-printed. After studying a few whole pieces, one can tell instantly on what part of the jar a small sherd fitted by examining the bit of painted pattern on its outside face. A few *Inca* pieces, however, show a freshness and originality comparable even to the finest Early Nazca pieces, but the rule in Nazca collections is the exception in *Inca* ones (fig. 28, p. 244).

The *Inca* decorated wooden cups, pottery, tapestry, and probably the walls of their houses with geometric patterns and life designs which are often informative and always charming. Motives are most often plants and flowers, next insects, then men, and last animals, especially llamas and pumas. Battle and hunting scenes are common, and women are usually shown with flowers. The figures are conventionally reduced to an idealized, somewhat geometric shape, filled in with simple areas of flat color.

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[25] Early in 1943, workmen removing gravel from a pit near the Cuzco railroad station found a few interments in habitation rubbish with Late *Inca* pottery, but the burials were removed before they could be properly recorded.

In contrast to Old World or Central American art, the *Inca* characteristically lacked interest in decorative stone sculpture and relief modeling. This does not reflect lack of technical ability or artistic feeling, for the *Inca* decorated a few stone bowls with animal and fish figures which will bear comparison with any *Aztec* work. Rather, the *Inca* had a functionalist's love of simple structural surfaces and solid blocks of stone, with surfaces uncluttered by carving. Wall paintings and decorative hangings prevented monotony and added a touch of color without destroying the structural lines of the wall.

Inca objects are solid and practical; beauty was never at the expense of utility. Stone bowl and silver pin, wooden cup and masonry house all give an impression of simple strength that can be very appealing to the modern inquirer.

Games and sports.—*Inca* children were so busy helping their parents in the daily tasks of farming, herding, and keeping house that they had time for few elaborate games. They made a top (PISQOYNYO) which was spun by whipping (fig. 29, *c*), played with balls (PAPA AWKI, "potato chief"), and played a kind of pig-pile (*taucca-taucca, "one pile after another") (Gonzalez, 1608; Poma, 1936, p. 208). The abundance of round pottery counters of grounded potsherds in all archeological periods at Cuzco suggests that some game such as flipping counters at a hole in the ground may have been played also. (See Morúa, 1922–25, bk. 2, 13.) Puma (POMA, "mountain lion") is the name of a game, but we are not told how it was played (González, 1608).

Contests of skill formed an important part of the boys' maturity rite (WARACIKOY), when the candidate's fitness for war was being tested. Foot races, bolas-throwing contests, and mock battles are mentioned as parts of this rite (Cobo, 1890–95, bk. 13, chs. 25, 26; bk. 12, ch. 15).

Adults played a number of games scored with a die marked with one to five points, and hence called PICQANA ("instrument for playing the game of fives," from PICQA, modern PISQA," five"). Pottery examples were found at Machu Picchu, and are illustrated by Bingham (1915 b, p. 176; 1930, fig. 172, *b–h*) and González says that dice were also made of wood. (Cf. González, 1608, under *pichcana; Cobo, 1890–95, bk. 14, ch. 17; Morúa, 1922–25, bk. 3, ch. 25.) The simplest game played with these dice (PICQA, "fives") seems to have consisted in trying to throw certain combinations of points (Cobo, 1890–95, bk. 12, ch. 15). Another game called COÑKANA was played with beans of different colors, and a board or stone marked into five divisions, counting, respectively, 10, 20, 30, 40, and 50. The beans were moved according to the points scored by throwing the die. Beans were also used for keeping score in other games called *tacanaco and *apaytalla (Cobo, 1890–95, bk. 14, ch. 17; Morúa, 1922–25, bk. 2, ch. 13). Morúa mentions another, supposedly difficult game called AWQAY, in which a board was used. The beans were moved in this game, and the scoring was with the PICQANA (Morúa, 1922–25, bk. 2, ch. 13). No gaming boards have yet been identified in the archeological collections from the Cuzco region. Some of these games may still survive among the Indians.

The *Inca* gambled lightly on games of skill and chance, betting such things as clothing, llamas, and guinea pigs, but amusement rather than winnings was the main purpose of their games. This attitude toward games was well exemplified by Atahuallpa at the time of the Conquest. (See The Neo-*Inca* State, this volume, p. 343. Also, Cobo, 1890–95, bk. 14, ch. 17; Morúa, 1922–25, bk. 3, ch. 25.)

Music.—A number of studies of Andean music have been made in modern times (cf. especially d'Harcourt, 1925; Mead, 1924), but all are unsatisfactory because they rather arbitrarily combine data from widely separated parts of the area and from different historical periods. Nearly all the archeological musical instruments studied are from graves on the Peruvian Coast, while the modern instruments are from the Highlands of Ecuador, southern Perú, and Bolivia. The information supplied by the chroniclers is meager, but it applies chiefly to Cuzco and the *Aymara*-speaking region around Lake Titicaca. The d'Harcourts had the excellent idea of collecting modern songs and looking for survivals of ancient musical practice in them, but of the 204 songs in their monumental collection, one was recorded here, two there all through the Andean countries, and no one region was studied sufficiently closely to control the survey. Another draw-back to the collection is that most of the songs were recorded from renderings by local Mestizo song collectors and not directly from the Indians. Consequently, further detailed studies of native music are urgently needed.

The *Inca* made a number of percussion and wind instruments, none very complicated. No examples are known to have survived, but the use of some is illustrated by Poma, and similar ones are abundant in archeological collections from the coast, of which good representative pieces are illustrated by d'Harcourt. The following can be identified:

The notched end-flute, quena (QINA or QINA-QINA), made usually of a joint of cane (*Cecropia* sp.), open at both ends. The number of finger holds (stops) varies: modern ones generally have six holes on the front and a thumb hole. The mouth end is notched, but there is no separate reed or whistle mouthpiece (Cobo, 1890–95, bk. 14, ch. 17).

A small bone quena (PIRORO) (González, 1608). Fragments of a bone flute about ½ inch (12 mm.) in diameter are on exhibition in the University Museum at Cuzco.

A small plug-flute has three or fourfinger holes (PIÑKOLYO) (González, 1608; Cobo, 1890–95, bk. 14, ch. 17).

The panpipes or syrinx (*antara or *ayarichic) are made of joints of cane graded in length (Cobo, 1890–95, bk. 14, ch. 17). They are not now played in the Cuzco region, but are known there as a typical *Aymara* instrument. D'Harcourt illustrates a variety of ancient examples of cane or pottery (1925, pls. 15–22).

A single-note trumpet made of a large sea shell (POTOTO) was used as a war trumpet by the *Inca*, and is used as a ritual instrument, blown at certain points in the Mass, by the modern *Quechua*.

A gourd trumpet (WAYLYA-KIPA) (Cobo, 1890–95, bk. 14, ch. 17). The *Inca* seem to have used no clay trumpets, though magnificent specimens have been found in older graves. (Chavín, Mochica, Recuay, Nazca, Pucara, and Chiripa. See d'Harcourt, 1925, pls. 10–13.) Wooden trumpets are also known from the Coast (d'Harcourt, 1925, pl. 13).

Drums made of a hollow log with two heads of llama hide (*huancar) and often painted. These varied from long war drums, about 20 inches (50 cm.) in diameter, to very small festival drums. They were played with a single drumstick by men and women drummers. In some dances, each performer carried his own drum. (Cobo, 1890–95, bk. 14, ch. 17; Poma, 1936, pp. 320, 324; González, 1608.)

A small drum or tambourine used in dances (TIÑYA) (González, 1608).

Small copper or silver bells (*chanrara). (See Bingham, 1915 b, p. 184; Cobo, 1890–95, bk. 14, ch. 17.)

Snail-shell rattles (*churu), used for anklets in dances. Certain pods from the eastern forests called *zacapa were also used for this purpose (Cobo, 1890–95, bk. 14, ch. 17).

The quena or end-flute was and is the only musical instrument of general popular use. Trumpets, big drums, and bone flutes were used principally in war, and small drums, bells, and rattles in festivals. The quena was used especially to play love songs, a use to which its haunting, vibrant tone makes it admirably suited (Garcilaso, 1723, pt. 1, bk. 2, ch. 26).

Little can be said about *Inca* music except that it was used for religious chants as well as for love songs (Poma, 1936, pp. 315–317). The d'Harcourts thought they could isolate a group of tunes in their collection composed on a pentatonic scale and seemingly very Indian in character, which, they suggest, represent a type of music which has survived from ancient times (1925, pp. 131–178). It would be highly desirable to check their material with more collected in the Cuzco region.

Dances.—An important element of all *Inca* public worship was dancing (see p. 308). The steps were usually accompanied by songs or chants and drumming by the dancers or by specially appointed drummers. The usual name for a ritual dance was TAKI, which also means singing. Dance costumes were very elaborate and included masks (fig. 25, *a*) and animal skins as well as special garments of ordinary cut. Costumes and dances varied widely from province to province.

Cobo gives brief descriptions of some of the dances used in Cuzco. The most common, called *guacon, was restricted to men. The dancers wore masks and carried animal skins or dried animals in their hands. The dance involved a lot of jumping. Another dance, called *guayayturilla, was for both men and women, who painted their faces and wore a gold or silver ornament over the nose. The accompaniment was played on an instrument made of the dried head of a deer. One dancer led off, and the rest followed. In a farmer's dance (HAYLYI) imitating the plowing festival, men and women carried the agricultural implements they used for breaking the earth. The warrior's dance (*cachua) was only performed on solemn occasions. Both sexes took part, the men dressed for war. The dancers performed in a circle with joined hands.

The *Inca* family had a special dance (WAY-YAYA) which was led by men carrying the royal standard and the CAMPI. It was accompanied by a great drum which an Indian of low birth carried on his back and a woman beat. Men and women joined hands to form long lines, with the sexes mixed or with men in one line and women in another. Two or three hundred people took part. The step was slow and dignified: one step backward and two steps forward, progressing across the Great Square to where the Emperor sat.

Another *Inca* dance was performed by a man with a noble lady on each hand. The movement consisted in twisting and untwisting the group without letting go, and struck Father Cobo as being the most interesting and pleasing of all the Indian dances. All dance steps were very simple (Cobo, 1890–95, bk. 14, ch. 17).

The word for dance mask was SAYNATA, and González' definition indicates that some masked dancers were buffoons (González, 1608, under *caynata and *saynata). It would be interesting to know whether the masked dancers ever represented supernatural beings or the dead, but the chroniclers do not state the purpose of the masks.

Narcotics.—Narcotics were unimportant in *Inca* culture. No narcotic was taken expressly to obtain visions, although suitable drugs were available in the eastern forests (notably ayahuasca). The strongest drug-containing substance used by the *Inca* was coca, next tobacco, and finally, perhaps WIL'KA, the narcotic properties of which have never been analyzed.

Coca (*Erythroxylon coca*; *Quechua*, KOKA) is a low bush which grows in the wettest belt on the eastern slopes of the Andes. The leaf had been used through the Andes for centuries before the *Inca* conquest, as attested by its presence in graves on the Coast, but the *Inca* restricted its use to the nobility and the demands of religion. In the early Colonial Period, the Spaniards enlarged the coca plantations and the use of coca spread to all classes of *Inca* society. Coca leaves were picked four times every 14 months, and then carefully dried and packed in bundles weighing about 18 pounds net for shipment by llama train to the Highlands.

The *Inca* used coca leaves for divining and sacrifice, and chewed them with lime to absorb a small amount of cocaine. The lime was made by burning quinoa stalks, bones, limestone, or sea shells. The Indians made a quid of leaves and lime about the size of a walnut and held it in their cheek, swallowing only the juice. The amount of cocaine liberated from a quid is minute and its only effect is to dull the senses slightly, making the chewer less hungry, thirsty, and tired. Coca chewing was believed to be very good for the teeth (Cobo, 1890–95, bk. 5, ch. 29).[26]

The *Inca* did not cultivate tobacco (SAYRI), but used several wild varieties native to the Andes. They powdered the root as a medicine, and the plant was believed to be a charm against poisonous animals and snakes. Tobacco was also taken as snuff (Garcilaso, 1723, pt. 1, bk. 2, ch. 25). Smoking is not mentioned as an ancient practice by any chronicler, but pottery objects resembling elbow pipes have turned up occasionally in archeological collections (Bandelier, 1910, pl. 77).

WIL'KA is a tree (*Piptadenia colubrina*) which produces pods containing bitter yellow seeds. The seeds were taken in chicha as a purge, and boiled to make a medicinal tea. Polo says that the sorcerers who communicated with the gods by visions got drunk on chicha with WIL'KA seeds in it, but it is not clear whether the seeds helped produce visions, or were taken only for their purgative qualities. González gives "xeringar villcani" (1608, p. 330). This translation suggests that WIL'KA was used also as an enema with a syringe of some sort, and the deduction is confirmed by Poma (1936, p. 71).

Intoxicants.—The *Inca* made a number of fermented drinks or chicha (AQHA) from different cultivated plants—maize, quinoa, ocas, and molle berries—but had no distilled liquor. Chicha was made by women, who chewed the pulp of the fruit used, and spat the mash out into jars of warm water. The liquid was then allowed to ferment to the desired strength. The strongest chicha was made from molle berries.

Chicha was the everyday Indian beverage, and was also an important element in all ceremonies, being served in enormous quantities during ritual dances, when all the participants were supposed to drink until they dropped. To the *Inca*, intoxication was a religious act, not an individual vice. Indians did not drink to excess except at the prescribed point in their regular ceremonies. Many of the Spanish missionary tirades against Indian drunkenness stem from a realization that group intoxication was a pagan ritual and are part of the campaign against idolatry rather than against the abuse of alcohol as such. Intoxication is still a ritual act to the Highland Indians. (Cobo, 1890–95, bk. 6, ch. 78; bk. 11, ch. 6; Garcilaso, 1723, pt. 1, bk. 8, chs. 9-12; Polo, 1940, p. 193.)

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[26] Morúa claims that an especially fine variety of coca was grown on the coast, in the neighborhood of Ica. The claim may be absurd, but deserves careful investigation. (Morua, 1922–25, bk. 3, chs. 33, 48; bk. 6, ch. 6.)

RELIGION

The ritual and ceremonial life of the Andean Indians was extraordinarily rich, and the Indians showed such ingenuity in carrying out their old rites under the cover of Christian forms that some aspects of the ancient religion have survived almost unchanged to the present day. The Spanish missionaries of the 16th and 17th centuries, much concerned about their failure to stamp out the old paganism, studied its survival in great detail, especially in the Cuzco region (Polo, 1916 a; Molina of Cuzco, 1913; Betanzos, 1880; Cieza, 1880, bk. 2, chs. 27–30; Cobo, 1890–95, bk. 13) and in the hinterland of Lima. (Arriaga, 1920; Avila, 1939; Calancha, 1638, bk. 2, chs. 10-12, 19; bk. 3, chs. 1-19; RGI, 1881–97, 1: 70–72; Hernández, 1923; Medina, 1904; Romero, ed., 1919, 1923.) Although the religious practices of these two regions are similar, they differ in details and the names of cult objects. It is possible that many of the similarities are the result of *Inca* influence on the provinces under the Empire. The following describes only the *Inca* proper of the Cuzco region unless otherwise noted.

Inca religion emphasized ritual and organization rather than mysticism and spirituality, and its chief interests were the food supply and curing. Divination was such an important prerequisite to action that the influence of the priesthood on public affairs must have been very great. Sin and purification were important concepts, and gave *Inca* religion something of an ethical character. Sacrifice accompanied nearly every religious rite.

Supernatural beings.—The *Inca* worshiped a large number of supernatural beings of varying power and importance.

The Creator.—The greatest god was the Creator, a being without beginning or end, who created all the other supernatural beings, animals, and men, and ruled them very much as the *Inca* Emperor ruled his Empire. He was represented as a man, and the Spaniards saw several statues of him in various temples. The most important of those in Cuzco was a standing figure of solid gold, about the size of a 10-year-old boy, with his right arm raised as if in command and the right hand clenched, except for the thumb and forefinger (Molina of Cuzco, 1913, pp. 126–7). The Creator had no name but a long series of titles, the most usual being "Ancient foundation, lord, instructor of the world" (ILYA-TIQSI WIRAQOCA PACAYACACIQ). The chroniclers generally call him Viracocha, a Hispanicization of the middle title.[27]

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[27] Garcilaso is the only chronicler who calls the creator Pachacamac (i. e., PACA-KAMAQ, "maker of the world"), but Garcilaso's prestige in modern times has been so great that most modern accounts of *Inca* religion follow his example. (Cf. Means, 1931, Baudin, 1928, p. 61.) All other early writers use Pachacamac to refer specifically to an idol at the Coastal town of Pachacamac. The cult of this idol was so important that the *Inca* found it expedient to identify it with their own creator to the extent of calling it "maker of the world." The identification was never complete, however, as Pachacamac is never called Viracocha (Cobo, 1890–95, bk. 13, ch. 17).

Viracocha, the Creator, was the theoretical source of all divine power, but the Indians believed that He had turned over the administration of his creation to a multitude of assistant supernatural beings, whose influence on human affairs was consequently more immediate. He lived in the heavens, and appeared to men at crises. He was also a culture hero, as it was believed that after the creation He had journeyed through the country teaching people how to live and performing miracles. He finally reached Manta (in Ecuador), and set off across the Pacific Ocean walking on the water.[28]

The Sun.—The most important servants of the Creator were the sky gods, headed by the Sun, who was believed to be the divine ancestor of the *Inca* dynasty. The Sun protected and matured crops, and his cult was naturally preeminent among an agricultural people. He was thought of as male, but seems usually to have been represented by a golden disk with rays and a human face. There were several images of the Sun in Cuzco, and the official *Inca* worship seems to have been carried out in his name. Indians and Spaniards called the great Government-built sanctuaries "sun temples," and the fields which supported the religious officials, as well as the Chosen Women who served in the temples, are repeatedly mentioned as "of the sun." On detailed examination, however, it becomes apparent that the Sun's position was not as imposing as appears from these attributions. The "Temple of the Sun" in Cuzco housed images of all the sky gods of the *Inca* and a host of lesser supernaturals besides; its most important image was not of the Sun but of Viracocha. The fields attributed to the Sun supported the whole *Inca* priesthood, not just the ministers of the Sun, and the Chosen Women served all the deities in the temples, not the Sun alone. Although a very important power in *Inca* religion, the Sun was merely one of many great powers recognized in official worship, and his importance was more theoretical than real.[29]

The Thunder, or Weather God.—After the Sun, ranked Thunder, God of Weather, to whom prayers for rain were addressed. He was pictured as a man in the sky, and identified with a constellation. He held a war club in one hand and a sling in the other, and wore shining garments. The thunder was the crack of his sling, the lightning the flash of his garments as he turned, and the lightning bolt was his slingstone. The Milky Way was a heavenly river from which he drew the water for rain. According to Blas Valera, the rain was kept in a jug belonging to his sister, and fell when he broke the jug with a well-aimed slingstone (Garcilaso, 1723, pt. 1, bk. 2, ch. 27). This Weather God was called ILYAP'A (a word which includes the ideas of thunder, lightning, and thunderbolt) or INTI-ILYAP'A, or COQI-ILYA. The Indians called the Spanish firearms ILYAP'A (Hispanicized, illapa), and identified their Weather God with Santiago (Saint James, patron saint of Spain).[30]

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[28] The title of WIRAQOCA was applied to the Spaniards and is still used to address White men. There is little doubt that in the 16th century it implied divinity, and that the Spaniards were regarded with a certain amount of awe. Polo says that after the capture of Huascar, the members of his party made frantic sacrifices to the Creator for deliverance from Atahuallpa's vengeance. When the news arrived almost immediately that strange White men from over the sea had captured Atahuallpa, Huascar's party concluded that the White men had come in answer to their prayers, and so called them WIRAQOCA. Polo adds that Atahuallpa's followers, until long after the fight at Cajamarca, called the Spaniards not WIRAQOCA but SOÑKHASAPA, "bearded men" (Polo, 1940, p. 154). On the attributes of Viracocha, see Cobo, 1890–95, bk. 13, chs. 2, 4; Molina of Cuzco, 1913, pp. 122–127; Sarmiento, 1906, chs. 6, 7; Cieza, 1884, bk. 2, ch. 5; Betanzos, 1880, chs. 1–3.

[29] The Sun was called INTI, "sungod," and P'ONCAW, "daylight" (modern P'ONCAY). Polo and his disciples, Acosta and Cobo, say that there were three images of the Sun called APO-INTI, "lord sun," CORI-INTI, "son sun," and INTI-WAWQI, "sun brother," for which different explanations were given. (See Cobo, 1890–95, bk. 13. ch. 5.) While the existence of these three statues is perfectly possible, they look suspiciously like a conscious imitation of the Christian Trinity made up for the benefit of the Spanish missionaries. For the Sun in general, see Cobo, 1890–95, bk. 13, ch. 5; Pachacuti, 1879; Molina of Cuzco, 1913, p. 127; Cieza, 1880, bk. 2, ch. 27; Poma, 1936, pp. 79, 258, 264, etc.

The Moon.—The third great sky deity was the Moon (MAMA-KILYA, "mother moon"), a woman and wife of the Sun, important chiefly in calculating time and regulating the *Inca* festival calendar. The Indians believed that a moon eclipse was caused by a serpent or mountain lion trying to devour her, and made all the noise possible to scare off the attacker, threatening it with their weapons. This custom is still practiced in Cuzco.

The Stars.—A number of stars or constellations were believed to be the special patrons of certain human activities. The Pleiades (QOLQA, "granery") watched over the preservation of seed, and marked certain agricultural seasons. A group of stars in Lira called ORQO-CILYAY, representing a parti-colored llama, watched over the flocks. Other stars of uncertain identification watched over wild animals; the snakes, for instance, had a patron star called MAC'AQWAY, "snake." Venus as the Morning Star was called CHASKA QOYLYOR, "shaggy star," and figured prominently in mythology. *Inca* star lore was very elaborate, but only a few fragments of it have been preserved by the chroniclers. It is quite possible that much more has been preserved to the present day by oral tradition. (Cobo, 1890–95, bk. 13, ch. 6; Calancha, 1638, bk. 2, ch. 11; Valera, 1879, pp. 138–140; Pachacuti, 1879, pp. 256–7; González, 1608.)

The Earth and Sea.—Of equal importance with the sky gods were the female supernaturals, Earth (PACA-MAMA, "earth mother") and Sea (MAMA-QOCA, "mother sea"). Earth was especially important to the Highland Indians concerned chiefly with agriculture, whereas Sea was especially worshiped by the fishermen of the Coast (Cobo, 1890–95, bk. 13, ch. 7).

Huacas.—All other supernatural powers worshiped by the *Inca* were either places or objects, of local importance only, and are generally referred to indiscriminately as huacas (uacas, guacas, from

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[30] Although there is no reason to assume that the religion of the people of Tiahuanaco was the same as that of the *Inca*, if such an assumption is to be made, a very good case could be made out for identifying the central figure on the Monolithic Gateway ("Portada del Sol") at Tiahuanaco with ILYAP'A or his *Aymara* equivalent, THONAPA. On the Thunder God in general, see Cobo, 1890–95, bk. 13, ch. 7; Molina of Cuzco, 1913, pp. 132–3; Pachacuti, 1879, pp. 237–240.

WAK'A, "shrine"; they were also called WIL'KA). It is not entirely clear whether the Indians believed that the supernatural beings had a separate existence from the object in which they resided (animism), or whether the object was the supernatural being (animatism), although the latter appears to have been the case. The problem is complicated by the Spanish practice of speaking of the shrines as inhabited by devils, probably from their own rationalization of oracular responses.

The shrines called huacas were so numerous that very few inhabitants of any town could have known all the recognized ones in the neighborhood. Cobo lists over 350 huacas in a radius of perhaps 20 miles around Cuzco, and Polo de Ondegardo indicates that they were proportionately numerous in most other Highland towns. Those listed for Cuzco include temples and cult objects, tombs of ancestors, places associated with mythological characters or dead *Inca* Emperors, battlefields, calendar markers, hills, caves, springs, palaces, prisons, houses, meeting places, bridges, forts, quarries, stones, and roots. The most numerous were springs and stones, which together formed nearly half of the total. Buildings and hills were also numerous.

A few of the most important huacas were worshiped as the residences of important natural powers. A flat place in one of the squares at Cuzco was supposed to be the abode of the Earthquake, and a doorway in one of the palaces, the home of the Wind. Some objects associated with the cult were worshiped; for instance, the brazier from which fire for sacrifice was taken, a field dedicated to the cult of Huanacauri, and so forth. Places associated with an Emperor, especially with Pachacuti or Topa Inca, or with Topa Inca's queen, Mama Ocllo, were huacas. The stones which had turned to men to help Pachacuti defeat the *Chanca* were very numerous. The city of Cuzco itself was sacred, as is clear from the fact that the places where a traveler caught his first and last glimpses of it were important shrines.

The most important huaca outside of the temples of the sky gods was Huanacauri (WANAKAWRI), a spindle-shaped unwrought stone on Huanacauri hill near Cuzco, which was believed to represent one of Manco Capac's brothers (see Cobo, 1890–95, bk. 13, ch. 25; Rowe, 1944) and was a special protector of the *Inca* royal family and a prominent feature in the maturity rites of the *Inca* youth. Certain other hills near Cuzco were also of exceptional importance (Anahuarque, Senca, etc.). In general, the supernatural power of a hill or mountain varied in direct proportion to its height, and all snow-capped peaks were very important deities. The powerful peaks of Ausangate (visible from Cuzco), Vilcanota, Coropuna, and Pariacaca were widely worshiped. This mountain worship is a very important element of modern *Quechua* religion. In modern times, mountain peaks are called APO ("lord"), but this title does not appear to have been used in ancient religion (Cieza, 1880, bk. 2, ch. 27; Poma, 1936, p. 266).

Two kinds of huacas were associated with cultivated fields: the boundary markers (SAYWA) and the field guardians (WAÑKA). Field guardians were long stones set upright in the center of the field, and their importance is indicated by the fact that the principal WAÑKA of Cuzco was believed to have been a brother of Manca Capac (Sarmiento, 1906, ch. 13).

Another special type of huaca was the APACITA, a pile of stones marking the top of a pass or other critical point on a road, where travelers stopped to make small offerings and pray for strength before continuing. The offering might consist of worn-out sandals, a coca quid, straw, another stone added to the pile, or anything else of little value. This custom is still general throughout the Andes on trails where the Indians travel on foot, and the ancient huacas are being constantly augmented (Cobo, 1890–95, bk. 13, ch. 11).

Besides the localized huacas, the *Inca* used a variety of portable images and amulets for different purposes. Some were in human form, some represented animals, ears of maize, or potatoes, and others were natural stones of unusual shape or color, bezoar stones, or crystals. These were all called indiscriminately WAK'A, but were distinguished by function, as WASI-KAMAYOQ, "house guardian," SARA-MAMA, "maize mother," etc. Bezoar stones, favorite amulets, were called ILYA or AYAYLYA.[31]

Bodies of the dead and all unusual things were also called huaca, regarded with awe, and worshiped. González (1608) gives the following examples: AYRIWA-SARA ("April maize"), two grains of maize growing together, or a stalk with a black and a white ear on it; twins (WAK'A-WACASQA or ISKAY-WACASQA); persons with six fingers like a puma (POMA-RONA); persons born feet first (*chacpa). Similar terms are given by Arriaga for central Perú.

Each *Inca* Emperor had a personal guardian, usually a portable huaca, which he called WAWQI, "brother," and which protected and advised him. It is not certain whether other men also claimed to have personal guardians, but it seems likely. These guardians were rarely animals. Pachacuti took an image of the Thunder God for his guardian (Sarmiento, 1906, ch. 14; Cobo, 1890–95, bk. 12, ch. 13; bk. 13, ch. 9).

Evil spirits.—Evil spirits (SOPAY) were probably numerous, but the chroniclers avoid the subject so consistently that we know little about them. González (1608) says that the Indians greatly feared "an apparition or fairy which used to appear with two long teats so that they could grasp them" (HAP'IYNYONYO), and OMA-POFIQ, a human head which went abroad at night saying "wis, wis." The wandering heads were believed to be witches who assumed that shape in the course of their evil activities. (See González, 1608, under *hapuñuñu and *vissocho.) Many ancient beliefs about evil spirits and apparitions havesu rvived in *Quechua* and Mestizo folklore, and could be collected from oral tradition.

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[31] Cobo, 1890–95, bk. 13, ch. 11; Arriaga, 1920; González, 1608. Amulets were called *conopa on the Coast and *chanca in some parts of the Highlands, according to Arriaga. In modern literature, the term "conopa" is frequently used to distinguish portable from localized huacas.

The *Inca's* supernatural beings were almost entirely potential protectors and friends of man, who only punished with bad luck for remissness about ceremonial obligations or for sin. They were worshiped in the hope of gaining practical benefits. The evil spirits were of much less importance, and seem not to have been worshiped, except perhaps by sorcerers, as they were believed incapable of anything but evil.

Life after death.—Virtuous persons went to live with the Sun in heaven (HANAQ-PACA, "upper world"), where there was plenty to eat and drink and life went on much as on earth. Sinners went to the interior of the earth (OKHO-PACA), or hell, where they suffered from cold and hunger, and had no food but stones. The nobility, however, was believed to go to heaven regardless of moral character. Under certain circumstances, the souls of the dead might linger on earth, and, in any case, they protected their descendants. They required offerings of food and liked to have their bodies brought out to take part in festivals. The *Inca* did not believe in the resurrection of the body. A belief in reincarnation is mentioned for the *Cavina*, near Cuzco, but not for the *Inca* proper, nor for other peoples of Perú (Cobo, 1890–95, bk. 13, ch. 3; Cieza, 1554, bk. 1, ch. 97).

Shrines and temples.—*Inca* temples were built to house the cult objects, priests, and attendants, with space for the storage of regalia. They were not meant to shelter congregations. The holiest *Inca* temple, the "Temple of the Sun" in Cuzco, was built on the same plan as an ordinary house compound, with six or more one-room buildings grouped around an open courtyard and surrounded by a blank enclosure wall. The construction was superb, and the buildings were lavishly decorated with gold plates for impressive effect. The buildings were used chiefly for storage and as the living quarters of priests and consecrated women. Most ceremonies were conducted in the open air. Most huacas were outdoors, although there might be buildings nearby for the attendants, as at Huanacauri. Most of the great *Inca* ceremonies took place in the Great Square of Cuzco (HAWKAY-PATA, "leisure square"), or in one of the smaller squares near the Temple of the Sun (INTI-PAMPA, RIMAQ PAMPA). The cult objects were brought out into the square, and divination, sacrifice, prayer, dancing, and drinking were carried out in public. Ordinarily, only the priests and *Inca* officials were permitted to enter the temples (Cobo 1890–95, bk. 13, ch. 12, etc.; Rowe, 1944).

Priesthood.—All important shrines had at least one resident attendant; the larger ones had a considerable staff of diviners, sacrificers, caretakers, and so forth. Shrines of the official cult ("Sun Temples") also had a group of consecrated women (MAMA-KONA, "mothers"), chosen from among the Chosen Women (p. 269), who were sworn to perpetual chastity, and who spent their time weaving the textiles used in ceremonies as garments by the priests, victims, and images, or as sacrifices, and preparing chicha for festivals. These women formed a sort of order, presided over by a high priestess (*Coya pacsa), who was supposed to be the Sun's wife, and was always of the noblest birth (Molina of Cuzco, 1913, p. 141; Cobo, 1890–95, bk. 12, ch. 37). The priests in charge of official shrines were organized into a graded hierarchy, corresponding roughly to the pyramid of Government officials. The lowest rank included the assistants at the important shrines, then priests in charge, with responsibility varying according to the size of the shrine, and at the top a high priest who was one of the most important officials of the Government and was usually a near relative of the emperor.[32]

Shrines of only local importance were supported by the families or ayllu interested and attended by an old man incapable of doing hard work in the fields, who probably was not part of the official hierarchy. Besides tending the shrine, making sacrifices, and praying when paid to do so, the priest or attendant was a diviner, interpreter of oracles, and confessor. In ordinary *Quechua* usage, his title varied according to his function; there was probably no general word summing up all his priestly functions. He might be called *huatuysapa (ACIQ), diviner; ICHORI, confessor; OMO, sorceror; *yacarca, consultant of the dead; KAL'PA-RIKOQ, diviner from the lungs of sacrificed animals. There were undoubtedly specialists, but the variety of titles does not mean that methods of dealing with the supernatural world were rigidly departmentalized among the *Inca*. (See The *Aymara*, p. 564.)

As the diagnosis and treatment of disease was essentially a priestly function, and disease was explained by the Indians in religious terms, the priests and attendants at the huacas were usually curers besides, and might answer to the additional titles of HAMP'I-KAMAYOQ, "medicine expert," KAMASQA, "cured," etc, (See Disease and Curing, p. 312) Practitioners of white or black magic might or might not also be attendants on the huacas. Blas Valera mentions a special class of ascetic hermits, but his whole description of the personnel of *Inca* religion too closely parallels Catholic practice to inspire much confidence. (Cobo, 1890–95, bk. 13, ch. 35; Molina of Cuzco, 1913, pp. 129–130; Polo, 1916 a, ch. 13; Valera, 1879, pp. 156–163; González, 1608; Arriaga, 1920.)

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[32] The chroniclers give a number of widely differing accounts of the official priesthood, but the differences seem to be due mostly to the varying influence of Catholic ideas on the description, and to lack of agreement on the *Quechua* names for the official priests ("sun priests"). Cobo calls the priests TARPONTAY, and says that they all belonged to the ayllu of that name. Guaman Poma and Pachacuti call them WISA (in compound forms WALYA-WISA, "hualla- priest"; KONTI-WISA, "conti- priest," etc.). Blas Valera says that important priests were called WIL'KA, and assistants YANA-WIL'KA "servant priest"). Blas Valera is generally unreliable about religion, and the dictionaries give WIL'KA as a synonym for WAK'A, "shrine."

The high priest's title is variously given as WILA-OMA, WILYA-OMA, ("announcement head," cf. Catholic nuncio) or WILYAQ-OMO ("announcing sorceror"). The second form is probably the correct one. (Cobo, 1890–95, bk. 13, ch. 33; Cieza, 1554, bk. 1, ch. 92; bk. 2, ch. 27; Las Casas, 1892, ch. 10; Valera, 1879, pp. 157–163; Garcilaso, 1723, pt. 1, bk. 3, ch. 22; Molina of Santiago, 1916.)

Ceremonial practices.—*Inca* religion displays characteristic Andean formality and richly developed ceremonialism. (See modern *Quechua* and *Aymara*.) Many of the favorite *Inca* ceremonial practices will be discussed in connection with confession, sacrifice, and public ceremonials, but a few deserve independent mention.

The *Inca* recognized only two ceremonial directions, east and west, which were important because of the rising and setting of the sun. *Quechua* lacks words for north and south, and customarily gave directions in relation to known geographical points; for example, "in the direction of Quito." The neighborhood of Cuzco was divided into ceremonial quarters corresponding to the four great divisions (SOYO) of the whole Empire, and the two north quarters corresponded to "Upper Cuzco," the two south quarters to "Lower Cuzco." These quarters were areas, not directions, however. The huacas in each quarter were under the care of the ayllus or *Inca* lineages living in the quarter.

The classification of the huacas within these ceremonial quarters is interesting. The huacas were thought of as lying along a limited number of lines radiating from the Temple of the Sun. Each quarter contained nine lines, except KONTI-SOYO, which had 15. Each line included 4 to 15 irregularly distributed and ceremonially named huacas. The lines were grouped by threes in the quarters with nine lines, a series of three names being repeated: *cayao, *payan, and QOLYANA ("excellent"). In KONTI-SOYO, the line names were somewhat irregular. This arrangement of the huacas by lines and quarters was beautifully adapted to the *Inca* system of recording on knotted strings; each huaca was a knot, each line a string, and the strings were probably of three kinds corresponding to the three repeating names, and differing by size or color. The huaca classification was diagramed by Polo de Ondegardo before 1561 (the famous "Carta de Zeques" or "Diagram of SIQ'I (lines)"). Molina of Cuzco rewrote the diagram in the form of a list, which has been preserved by Cobo (1890–95, bk. 13, chs. 13–16). Polo's diagram is lost, but can be easily reconstructed from the list.

The huaca classification provides almost the only information about *Inca* ceremonial numbers, and suggests the importance of three. Because of the general silence of the chroniclers on the subject it seems likely, however, that ceremonial numbers were unimportant in *Inca* religion.

The *Inca* had a standard gesture of reverence in addressing any divine being or the Emperor. The worshiper stood facing the object of his reverence, and bowed low from the hips with his arms stretched out in front of him, parallel to each other and a little above the level of his head, the hands open and the palms out. Then he made a kissing noise with his lips (labial click), brought his hands to his lips and kissed the fingertips. As a sign of extra reverence while worshiping the Creator, the Sun, or the Thunder, the worshiper held a switch in in his hands. The gesture of reverence was called MOCHA, from which the Spaniards made a verb "mochar" which the chroniclers used repeatedly to mean "worship Indian fashion."

In passing a spring or crossing a river, travelers stopped to take a drink of the water and prayed for permission to pass and a safe journey.

When drinking chicha, the Indians dipped their fingers in the liquid and spattered it toward the Sun, the Earth, or their fire, with a prayer for life, peace, and contentment. There was no set form of words for an oath, but a man might grasp a handful of earth and look toward the Sun, as if taking PACAMAMA and INTI as his witnesses (Cobo, 1890–95, bk. 13, ch. 23).

Another important ceremonial act was fasting, which assumed a number of forms. The lightest fast consisted in abstaining from salt and chili pepper; a more serious form prohibited taking meat and chicha, and indulging in sex relations. In another fast, only cooked maize, herbs, and cloudy chicha were consumed (Cobo, 1890–95, bk. 13, ch. 24; Molina of Cuzco, 1913, pp. 135–36, 169).

Prayers.—The *Inca* prayed both silently and aloud, and usually made up their own prayers to fit the occasion. They also asked the priests or their friends to pray for them when the object of the prayer was sufficiently important. It was customary to preface any prayer to a huaca with one to Viracocha. Cobo (1890–95, bk. 13, ch. 21) gives a sample prayer, such as a farmer might address to the spring which supplied his land with water:

> To thee, Lord, who nourishest all things and among them wast pleased to nourish me and the water of this spring for my support, I pray that thou wilt not permit it to dry up, but rather make it flow forth as it has done in other years, so that we may harvest the crop we have sown.
>
> O fountain of water which for so many years has watered my field, through which blessing I gather my food, do thou the same this year and even give more water, that the harvest may be more abundant.

Such a prayer was followed by an offering.

The prayers for the great public ceremonials were traditional, and did not vary. Many have been preserved by Molina in the original *Quechua* (Molina of Cuzco, 1913), and a few English translations are given by Means (1931, pp. 437–39). The authorship of such prayers was traditionally assigned to Inca Pachacuti, as the Psalms are assigned to King David. Many are very poetical and have great literary merit. (See also Pachacuti, 1879, 1927; Cobo, 1890–95, bk. 13, ch. 23.)

Feasting, drinking, songs and dances, games, and most other group activities were ceremonial as well as lay acts, although discussed above under Esthetic and Recreational Activities. It was the religious nature of *Inca* literature, music, and public festivals that caused their persecution by the Spanish missionaries and their consequent modification under Spanish rule.

Divination.—The *Inca* believed in the necessity of consulting the supernatural beings before taking any important action. Divination was practiced to diagnose disease, determine the truth of a confession, locate lost property, identify hostile sorcerers, choose between possible heirs, determine the most acceptable sacrifice to a deity being worshiped, and, in general, to settle any doubtful question. In addition, the Indians were constantly on the watch for omens by which they could adjust their conduct to future events.

The most direct type of divination was the oracle. Any huaca might answer questions, but there were a few oracles with such prestige that they were consulted by people from many different parts of the Empire. The most famous were: APO-RIMAQ ("lord oracle"), whose shrine was on the banks of the Apurimac River near Cuzco; PACA-KAMAQ, at Pachacamac on the central coast; RIMAQ ("oracle") at Maranga, near Lima; and WARI in the valley of Jauja. The first, a good example of such oracles, was a building housing a tree trunk decorated with golden breasts and sash, and dressed in fine woman's clothing, with a row of smaller figures on each side. The images and their garments were stained with the blood of sacrifice. A priestess called *sarpay had charge of the shrine. During the rising of Manco Inca (1534), a Spanish prisoner watched him question the "lord oracle" and heard it reply (Cobo, 1890–95, bk. 13, chs. 20, 36). Usually, the oracle had to be interpreted by the attendant priest.

The sorcerors (OMO) claimed to speak directly with the spirits. They usually dressed differently from ordinary people, and wore their hair long or cut in some special way. They were usually consulted to find lost or stolen articles or to learn what was happening at a distance. They talked to the spirits in the dark, and theirs and the spirits' voices could be heard but not understood. Some diviners summoned the spirits by saying a spell and drawing lines on the ground, others drank themselves into insensibility and gave their answers when they recovered. The latter put the juice of the WIL'KA, a berry also used as a purge, into their chicha to give it more strength (Cobo, 1890–95, bk. 13, ch. 36; Polo, 1916 a, ch. 10).

The most solemn method of *Inca* divination was communication with spirits by means of fire. Its chief practitioners (*yacarca), natives of Huaro, near Cuzco, were greatly feared and respected. They placed two metal or pottery braziers end to end, and built fires in them with slivers of wood soaked in fat. The fire was controlled by blowing through a metal tube with a copper mouthpiece and the lower end of silver. Around the braziers, dishes of food and drink were set out. Then the officiating diviner took a quid of coca in his mouth, and began to invoke the spirits by chanting and weeping, inviting them to come and partake of this banquet offered to them in the presence of the holy Fire, the Sun, and the Earth. The spirits summoned might be those of living or dead persons. As the flames got higher and began to come out of the openings in the braziers, the voices of the spirits were heard coming from the fire, probably by ventriloquism. First, the spirits accepted the banquet offered to them, and then they answered questions put to them through the diviner. At times, a diviner summoned a different spirit in each brazier and conversed with both of them. The spirit's statements were ratified by streams of flame issuing from designated openings in the brazier, manipulated, of course, by the assistants with the blowing tubes. This method of divination was employed only for very serious matters, such as to identify treasonable plotters, and it was accompanied by sacrifices of children, spotless white llamas, gold, silver, and other valuable objects. The Emperor himself was sometimes present, having prepared himself by fasting for 2 or 3 days.

Government officials customarily divined the outcome of important decisions, like a military campaign or the choice of an heir, by a sacrifice called KAL'PA ("strength"). A priest sacrificed a llama, took out the lungs, and blew into a vein; the markings on the lung's surface indicated whether the augury were good or bad. In less important cases a similar ceremony was carried out with a guinea pig or even a bird. (Cobo, 1890–95, bk. 13, ch. 34; Molina of Cuzco, 1913, p. 129; Sarmiento, 1906, chs. 27, 62.)

Simpler methods of divination were numerous and varied. One common type involved counting a pile of small objects to see if they came out odd or even; maize kernels, beans, pellets of llama dung, and pebbles were all used. The pebbles used were usually supposed to have a magical origin; they were received in a dream from the Thunder God or some huaca, or a woman had borne them after being made pregnant by the Thunder on a stormy day in the fields. Some diviners chewed coca, and spat the juice onto the palm of their hand, with the two longest fingers extended: If it ran down both fingers equally, the augury was good; if unequally, it was bad. Another method was to burn llama fat and coca leaves, and watch the way in which they burned. (Cobo, 1890–95, bk. 13, ch. 34; Molina of Cuzco, 1913, p. 129; González, 1608, under *achik and *huatuc.)

A good deal of divining was done by observing the movements of animals, particularly snakes and spiders. The spider diviners were especially respected in the Chinchasuyo quarter, which included Central and Northern Perú. When the diviner was consulted, he uncovered a large spider which had been kept shut up in a covered jar; if any of its legs were bent, it was a bad augury (Cobo, 1890–95, bk. 13, ch. 34).

Dreams were regarded as supernatural experiences and omens of great importance: fire meant sickness; a river, a bridge, or the sun or moon meant the death of a parent; killing a llama foretold the death of a father or brother, and so on (Poma, 1936, pp. 282–83; Cobo, 1890–95, bk. 13, ch. 38). Occasionally, the supernatural beings appeared directly to important people in dreams. Both Viracocha and the Sun appeared at various times to the Emperors to promise them help and success. (Molina of Cuzco, 1913, p. 127; Betanzos, 1880, ch. 8; Sarmiento, 1906, ch. 24; Cobo, 1890–95, bk. 12, ch. 10.)

Evil omens seem to have outnumbered good ones in *Inca* belief. Eclipses and falling stars were very bad, and the latter foretold the death of an Emperor. The very word for comet (TAPIYA QOYLYOR) meant "star of ill omen." A comet appeared during the imprisonment of Atahuallpa at Cajamarca, and he concluded immediately that death was near (Cieza, 1554, bk. 1, ch. 65; Xérez, 1917; pp. 111–12). The rainbow usually was regarded as an evil omen, but one which appeared over Huanacauri Hill during the migration of Manco Capac in the origin legend of the *Inca* was interpreted as a sign of divine favor (Pachacuti, 1879, p. 241). The hooting of an owl or the howling of a dog foretold the death of a relative, while the songs of other birds meant a quarrel. The Indians made offerings of coca to the birds, and asked them to direct the bad luck to their enemies. To see snakes, lizards, spiders, toads, big worms, moths, or foxes was a bad omen, especially if they were in the house. When an Indian found a snake, he killed it, urinated on it, and stepped on it with his left foot to ward off the omen. Twitching of the eyelid, lip, or other part of the body, stumbling, or humming in the ears indicated that the person was about to hear something said: good, if it were the right side of the body, bad if it were the left. When the fire jumped or gave off sparks, they believed it was angry, and poured a little maize or chicha on it to calm it (Cobo, 1890–95, bk. 13, ch. 38; Poma, 1936, p. 212).

Purification and confession.—The *Inca* believed that sin angered the gods, and made the sinner unfit to take part in any religious ceremony until he had confessed and purified himself. Worse, the sinner was in terrible personal danger, for the gods punished sin by bad luck in this life and consignment to the underworld in the life to come. Cripples and persons whose children died young were looked upon as very great sinners to have deserved such bad luck from heaven.

The Emperor's illness was attributed to the sinfulness of his subjects, who confessed and purified themselves to speed his cure.

The most serious sins were murder, especially by poisoning or witchcraft, stealing, carelessness in worship, neglect of festivals, and cursing or disobeying the Emperor. Fornication and seduction were sins because the Emperor had forbidden them. Only overt acts were confessed; thoughts were not considered sinful.

The confessors were usually priests of both sexes in charge of huacas. Serious sins were taken to more important priests. *Aymara* confessors were considered to be the best, and, at Cuzco, the *Aymara* name (ICHORI, "straw man") was used for the office. Members of the *Inca* royal family never consulted professional confessors, but confessed directly to the Sun in secret, asking the Sun to be their intercessor with Viracocha. After such a confession, the noble bathed in a river, asking the river to carry away his sins. With a few exceptions, professional confessors were bound to secrecy.

In confessing one was supposed to tell the whole truth, for hiding a sin was a serious sin in itself. The confessor counted a pile of small stones or examined the entrails of an animal to see if the truth had been told. If the augury were unfavorable, or if there were any other reason to suspect a lie, the confessor struck the man in the back with a stone and made him confess again.

After a satisfactory confession, the confessor gave a penance, usually several days' fasting or a night spent in prayer at the huaca. The penance was likely to be heavier if the sinner were poor and could not pay the confessor. The penitent finally washed in running water to purify himself. Some confessors made the penitent hold a handful of straw during the confession, spit in it, and throw the straw into a river afterward as a symbol of purification (hence the name ICHORI). (Cobo, 1890–95, bk. 13, chs. 24, 38; Molina of Cuzco, 1913, pp. 130–31; Polo, 1916 a, ch. 5.)

Sacrifices.—A great many sacrifices were made as part of certain festivals celebrated at fixed seasons. The sacrificial objects were provided from the fields and flocks dedicated to religion, part of which were assigned to each huaca. State sacrifices to the Creator were made in the name of the various huacas rather than in the Emperor's name. The priests of a huaca selected the proper offerings from its income and sacrificed them in its name. Extraordinary sacrifices were contributed by the people interested. The priests first determined by divination the most acceptable offering, and then collected the offerings. An individual's sacrifice was divided between the huaca and its priests, providing part of the latter's upkeep.

The most valuable sacrifice was of human beings, who were offered only to the most important divinities and huacas on the most solemn occasions, such as pestilence, famine, and war reverses, at the coronation of a new Emperor (when 200 children were sacrificed), when the Emperor went to war in person, or when he was sick.[33] There were three types of victims. When a new province was conquered, a few of the handsomest inhabitants were brought to Cuzco and sacrificed to the Sun in thanks for victory. All other victims were boys and girls collected from the provinces as part of the regular taxation, or offered by their parents in time of terrible need. They had to be physically perfect, without marks or blemishes, the boys, about 10 years old, the girls 10 to 15. The girls were picked from the Chosen Ones being educated in the convents. The children were feasted before being sacrificed, so that they might not go hungry or unhappy to the Creator; older children were usually made drunk first.

The victims were made to walk around the image or cult object two or three times, and were then strangled with a cord, their throats cut, or their hearts cut out and offered to the deity still beating. With the victim's blood, the priest drew a line across the face of the image or royal mummy bundle from ear to ear, passing across the nose. Sometimes the blood was smeared all over the body of the image and sometimes it was poured on the ground.

When an Indian was very sick, and the diviner told him he would surely die, he sometimes sacrificed his own son to Viracocha or to the Sun, praying that the god be satisfied with the life offered and spare his own. (Cobo, 1890–95, bk. 13, ch. 21; Molina of Cuzco, 1913, pp. 177, 183; Morúa, 1922–25, bk. 3, ch. 44, bk. 4, ch. 2; Cieza, 1880, bk. 2, ch. 28; Polo, 1926 a, ch. 9.)

The usual sacrifices, however, were llamas and guinea pigs, which were offered in large numbers to all the huacas. Wild animals were not ordinarily sacrificed, except that birds were used in the war rite. (See Warfare, p. 280.) A ceremonially fixed number of llamas were chosen, each animal having a color, amount of wool, and markings appropriate to the god, the festival, and the season. Brown llamas were usually sacrificed to Viracocha, white llamas and alpacas to the Sun, and particolored llamas to the Thunder. The priest led the animal around the image, then took its head over his right arm, turned it toward the god, said the words of offering, and slit its throat.

Food and chicha were regularly offered to the huacas and to the bodies of dead Emperors. The food was burned, and the chicha poured onto the ground. When the food for the Sun was burned, an attendant announced the offering in a loud voice, and all the Indians within hearing sat without speaking or coughing until the offering was consumed. In public festivals, the Emperor poured an offering of chicha into a great gold cup in front of the image of the Sun, and the priests emptied it into a gold-sheathed stone basin which was kept in the Great Square for this purpose.

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[33] A survival of human sacrifice is reported from Huayllabamba in the Urubamba Valley by Juan José Escobar, of Cuzco. About 1903, during a severe drought, the villagers decided to make a sacrifice to the Urubamba River. The sorcerors picked a victim, and persuaded him to offer himself. A great festival was held, and the victim got drunk and threw himself into the river from a bridge.

Coca, the most important vegetable offering, was burned. Sometimes the leaves were burned whole, and sometimes after chewing. Maize flour and other powdered grains, wool, and llama fat were very common offerings. Fine clothing, full size or miniature, formed part of nearly every sacrifice. It was burned alone, or wrapped around bundles of carved wood which represented human beings. Gold and silver were offered in small lumps or in the form of human or animal figurines, and were usually buried or hung on the walls of the shrine. (Cobo, 1890–95, bk. 13, chs. 21–22; Molina of Cuzco, 1913; Morúa, 1922–25, bk. 13, ch. 13; Las Casas, 1892, ch. 12.)

Sea shells were the favorite offering to springs. Sometimes they were thrown in whole, other times cut into small pieces, carved into figures, or ground to powder. They were offered after planting, with a prayer, like the one translated above, that the spring continue to give its water. White maize flour and red ocher were offered to the sea. When no other offering was available, the worshiper pulled out a few eyebrow hairs or eyelashes and blew them toward the shrine.

In Cuzco, all fire for sacrifice had to be taken from a stone brazier near the Temple of the Sun, where a fire of carved and scented wood supplied by the *Chicha* tribe was kept always burning. (Morúa, 1922–25, bk. 14, ch. 2; Cobo, 1890–95, bk. 13, ch. 22.)

Certain sacrifices were performed daily in Cuzco. Every morning before sunrise a fire of carved wood was laid. Just as the sun appeared it was lighted, and some specially prepared food was thrown in, while the priest said, "Eat this, Lord Sun, in recognition of the fact that we are thy children." The priests ate the surplus. Later, a dark-red llama was sacrificed to the Sun, and some baskets of coca were burned with it.

Other sacrifices were made the first day of every month. The Emperor and his court assembled in the Great Square, and 100 picked llamas were brought in. The high priest then came forward, made a gesture of reverence to the images of Viracocha and the other gods, had the animals led four times around the images, and then dedicated them to Viracocha in the name of the Sun. The llamas were then distributed to 30 attendants who represented the days of the month. Each attendant brought out three or four for sacrifice on the day that his turn came, so that at the end of the month, the whole 100 had been sacrificed. A great fire of carved wood was built, and the sacrificed llamas were cut into quarters and burned as completely as possible. The unburned bones were ground to a powder, a little of which the priests blew from their hands while repeating a ritual phrase. Any powder that remained was stored in a building in the district called

POMA-COPA ("puma's tail").[34] White maize, ground chili pepper, and coca were thrown on the fire when the llamas were sacrificed (Cobo, 1890–95, bk. 13, chs. 21, 25).

Public ceremonials.—The public ceremonials of the *Inca* were numerous and elaborate. Most of them were regular festivals associated with stages in the agricultural year or with the calendar, but some were special ceremonies for times of drought or disaster, and the coronation or burial of an Emperor. In Cuzco, ceremonies were usually performed in the Great Square (HAWKAY-PATA, "leisure square") or in the smaller squares (INTI-PAMPA and RIMAQ-PAMPA). The Emperor and his court attended, and the images of the gods were brought from their temples and set up in the square. The mummy-bundles of dead Emperors, who were also regarded as divinities, were brought out with the images. Most ceremonies included elaborate sacrifices, dances, and recitations, during which all present consumed enormous quantities of chicha. Every detail of *Inca* ceremonies was regulated by ancient tradition, and no effort was spared to make them acceptable to the gods and impressive to the people.

The ceremonial calendar closely paralleled the agricultural one. (See Valcárcel, this volume, p. 471.) The year was divided into 12 lunar months, named for important festivals or for the agricultural season, and began probably in December. Because of the variable positions of such lunar months and the festivals they included in the solar year, it will be convenient to accept the month for month correlations reported by Polo, Acosta, and Cobo. (For the astronomical basis of the *Inca* calendar, see Lore and Learning, p. 327.) These chroniclers made QHAPAQ RAYMI correspond to December, and this correlation makes the sowing and harvest festivals come the nearest to the proper time of year. Detailed accounts of the *Inca* ceremonies and ceremonial calendar are available, especially in Cobo,[35] but a summary list with a more detailed account of one or two representative ceremonies is all that present space permits.

The *Inca* months were:

(1) QHAPAQ RAYMI ("magnificent festival"; spelled Capac *raymi by Cobo and Polo, and also called *raimi, rayme, and *raymiquiz). December. This, the first month of the rainy season, included the December solstice. In it, the *Inca* held their WARACIKOY rites, in which boys of the royal lineages were given their breechclouts and earplugs and admitted to the status of manhood. (See Life Cycle,

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[34] Near the modern railroad station.

[35] The best accounts of the *Inca* year are those given in Cobo, 1890–95, bk. 13, chs. 25–30; Molina of Cuzco, 1913, pp. 131–175; Polo, 1916 a, chs. 7, 8; Acosta, 1940, bk. 5, ch. 28; Anonymous Discurso, 1906, pp. 156–160; Poma, 1936, pp. 235–360. See also Means, 1931, pp. 367–384. On the time-reckoning aspects of the calendar, see below (p. 327). The names of the months are also given by Fernández, 1876, pt. 2, bk. 3, ch. 10; Betanzos, 1880, pp. 15, 18; and in part by González, 1608.

p. 282.) The rite was combined with a variety of semipolitical public ceremonies emphasizing the interest of the gods, especially the Sun, in the *Inca* state. All provincials resident at Cuzco had to leave the ceremonial center of the town during the 3 weeks of maturity rites, and when they returned they were fed lumps of maize flour mixed with the blood of sacrificed llamas (YAWAR-SAÑKHO, "blood porridge"), which they were told was a gift of the Sun and would remain in their bodies as a witness against them if they spoke evil of the Sun or of the Emperor. Several days of dancing and drinking followed. On the last day of the month, a special sacrifice was made at the hill of Puquin (POKIÑ), on the southwest side of the city. The products of the fields of the Emperor and of religion were brought in from the provinces at the end of the maturity rite (Cobo, 1890–95, bk. 13, ch. 25).

(2) KAMAY (spelled *camay by the chroniclers; also *pura opiaquiz, Fernández; coyaquiz, Betanzos; and camayquilla). January. On the day of the new moon, the newly matured boys staged a mock battle in the Great Square, and a llama was sacrificed to mark the end of a limited fast imposed on the city since the first day of the last month. The old llamas (APO ROKO) to be used in next year's maturity rite were consecrated, and a dance (YAWAYRA) was held for 2 days. Additional sacrifices and dances were held at the full moon, ending with a dance in which the performers carried a great woolen rope of four colors. Six days later, the ground bones of the previous year's sacrifices were mixed with coca, flowers, chili pepper, salt, burned peanuts, and chicha, and dumped into the river to be carried to Viracocha by the current (Cobo, 1890–95, bk. 13, ch. 26.)

(3) HATOÑ POQOY ("great ripening"; spelled *hatun pucuy; also called *colla-pocoyquis, Betanzos). February. Twenty guinea pigs and 20 loads of firewood were offered to the Sun, for the crops.

(4) PAWQAR WARAY (spelled *paucar-huaray; also *paucar aurayquiz, Fernández; *pacha pocoy, i. e., PACA POQOY, "earth ripening," Polo, Betanzos). March.

(5) AYRIWA (spelled *ayrihua; also *ayrihuaquiz, and *arihuaquiz). April. In this month, a ceremony was held in honor of the royal insignia. An elaborate pompon on a staff (SONTOR PAWQAR) and a perfect white llama (NAPA), both symbols of royal authority, were brought out into the plaza. The llama was dressed in a red shirt with golden ear ornaments and had its own attendants (YANA-KONA and MAMA-KONA). It was taught to eat coca and chicha, and took a prominent part in many ceremonies at Cuzco. It was never killed, and when it died, it received an elaborate funeral and was replaced by another picked animal. It was said to symbolize the first llama which appeared on earth after the Flood. In the April ceremony, 15 llamas were sacrificed in its name, and the NAPA offered chicha daily by kicking over jars of the beverage.

(6) AYMORAY (called also HATOÑ KOSKI, "great cultivation," usually written *hatun cuzqui by the chroniclers). May. The festivals celebrated the maize harvest. A large number of llamas were sacrificed to the Sun, and all the inhabitants of Cuzco ate some of the meat raw with toasted maize. Thirty llamas were sacrificed in honor of the huacas, and a little of the meat was taken and burned at each. The boys who had gone through the maturity rite the previous December harvested a crop of maize grown in a designated field, and then the nobles plowed the field ceremonially, accompanied by songs, races, and sacrifices. The MAMA-SARA rite, described under Agriculture, took place in this month also (Cobo, 1890–95, bk. 13, ch. 27).

(7) INTI RAYMI (also AWQAY-KOSKI, "warrior's cultivation"). June. This month included the June solstice and a great festival in honor of the Sun, when elaborate sacrifices were offered on the hills near Cuzco in the presence of the men of royal blood, and a dance (*cayo), which was performed four times a day.

(8) CAWAWARKIS (*chahuahuarquis; also *cauay, *chahuarhuay, *chaguaruayquez, and *cahuarquiz). July. Sacrifices were made to the huaca of *tocori, which presided over the irrigation system of the valley. Inca Roca was believed to have increased the supply of water for irrigation and to have instituted this sacrifice (Cobo, 1890–95, bk. 13, ch. 28).

(9) YAPAKIS (*yapaquiz; also *capac siquis, Betanzos). August. Sacrifices were made to all the huacas of the city, and a new maize crop was sown in the holy field mentioned in the ceremonies of May. A thousand guinea pigs were furnished by the provinces for sacrifice in this field in honor of the Frost, Air, Water, and Sun, as the powers with most influence on the crops, and a dance (WAYARA) was performed.

(10) SITOWA (*situa; also *coya raymi and *puzcuayquis, Fernández). September. In this month a little rain is likely to fall, and the festival of SITOWA was directed against sickness, especially that resulting from the change of weather. All persons with physical defects i. e., sinners, and dogs (whose howling was an evil omen) were sent out of the city. The day after the conjunction of the moon, the population assembled at the Temple of the Sun to wait for the appearance of the new moon. As soon as they saw it, they began to shout, "Sickness, disasters, and misfortunes get out of this land," and struck at each other with lighted torches, in fun. Then all went to their houses and shook their clothes from the door, as if to shake all evil out of the house. At the same time, four troops of 100 runners each, dressed for war, took up the cry from the priests at the temple, ran out along the 4 main roads, and passed it on to other waiting runners. The last runners along each road bathed themselves and their weapons in a river, so that the running water would carry the evil away. All the inhabitants of Cuzco also bathed. Then a porridge of partly ground

maize was distributed, and everyone smeared it on his face and the lintel of his door as a symbol of purification. Several days of dancing and feasting followed, after which there were more sacrifices, and the provincials were allowed to reenter and receive lumps of maize flour mixed with llama blood, as in the December ceremony. Then four llamas were sacrificed, and their lungs examined to see whether the year would be prosperous. All the tribes subject to the Empire got out their huacas and brought them into the Great Square to do reverence to the Emperor. (Cobo, 1890–95, bk. 12, ch. 29; see also Means, 1931, pp. 374–77; Molina of Cuzco, 1913, pp. 136–54.)

(11) K'ANTARAY (*cantarayquis, Fernández; *homa raymi punchayquis, Cobo; *omac rayma, Molina of Cuzco; etc.). October. This month was critical for the crops, which were sown mostly in August and September. A ceremony was held to bring rain if there was a drought. (See Agriculture, p. 210.) Preparations for the next year's maturity rites were started.

(12) AYAMARKA (*ayasmarca-raymi, Molina of Cuzco. The name is said to result from the fact that the *Ayamarca* tribe held its maturity rites in November). November. The boys who were preparing for the maturity rite spent a night at Huanacauri to make sacrifices and ask the huaca's permission to perform the rite (Cobo, 1890–95, bk. 13, ch. 30).

Some ceremonies were held without regard to the ceremonial calendar. The most important of these (*Itu) was performed whenever the *Inca* wanted their gods' help, for example, in times of pestilence, drought, or serious earthquake, or when the Emperor went to war in person. Everyone fasted for 2 days beforehand, abstaining from salt, chili pepper, chicha, and sexual intercourse. Then all provincials and dogs were sent out of the city, and the images of the gods were brought out into the Great Square. Two llamas were sacrificed, and, if the occasion were especially serious, some children were sacrificed also. The boys under 20 years old then put on special costumes of fine red shirts with long fringes and ornaments hanging to their feet, great feather crowns, and shell necklaces. In their hands, they carried small dried green birds and small white drums. The rest of the population wore their shawls over their heads, and preserved a strict silence.

The boys in costume walked slowly once around the square in procession, beating their white drums, and then sat down in silence. A noble then walked around the square where the procession had gone, scattering coca on the ground. After a short interval, the boys repeated their slow procession, and coca was again scattered. This ritual was completed eight times. That night, the performers stayed in the square praying to Viracocha and to the Sun as intercessor. In the morning, they returned the costumes to their storehouse, while everyone began a feast, with joyous dancing and chicha drinking which lasted for 2 days (Cobo, 1890–95, bk. 13, ch. 31; Acosta, 1940, bk. 5, ch. 28).

Disease and curing.—In *Inca* belief, all disease had supernatural causes, and had to be cured by religious and magical means. Even herbal medicines were used for magical reasons, rather than from any understanding of physiological processes. Consequently, curing was a very important part of *Inca* religion and an important cultural interest.

Disease might be caused by the following: Supernatural beings angered by sin or by the neglect of their cult; the magic of sorcerers hired by a man's human enemies; exposure to evil spiritual forces which were believed to reside in certain springs or wind; or the loss of one's soul as the result of a sudden fright. Sickness might take the form of a foreign object lodged in the body, displacement of the organs, or poison, or it might be simply a sort of magical influence.

An enormous variety of wild plants and plant products were used as medicines; it is quite probable that every plant known to the Indians was believed to have magical power either to cause or to cure disease. Many of the plants and their uses are listed by Cobo (1890–95, bks. 4–6), and the extensive survivals of this belief have been partially studied by modern Peruvian botanists (Herrera, 1940). Other substances used in cures were maize flour, guinea pig fat, amulets, and the variety of odd objects which were the stock in trade of *Inca* sorcerers. (See below.)

The curers were called HAMPI-KAMAYOQ, "medicine specialists," KAMASQA, "cured," SOÑQOYOQ, "heart men," etc. The general word for sickness was OÑQOY. A curer was usually a diviner as well, and might practice black magic in secret; there were no rigid divisions between such functions. Curing power was usually acquired either in a vision or by making an unusually quick recovery from severe illness (whence the name KAMASQA, "cured," applied to such practitioners). In the vision, a being usually appeared in human form and gave the sleeper the necessary instruments and instructions along with power to use them. Before treating a patient, the curer made a sacrifice to his vision.

Professional midwives got their power either through a similar vision or by bearing twins and going through an elaborate series of fasts and ceremonies. They massaged pregnant women to straighten out the fetus, and could produce abortions for a price.

Broken bones and dislocations resulted from the anger of the place spirit which controlled the spot where the accident occurred, and the curer made repeated sacrifices there as an important part of the treatment.

When a sick man summoned a curer, the latter first sacrificed to his vision, and then determined the cause of the disease by divination. If the sickness resulted from neglect of worship, the curer made several colors of maize flour, added ground sea shells, and put some of the powder on the sick man's hand. The patient blew the powder in the direction of the huacas with a prayer. Then he offered a little coca to the Sun in the same way, and scattered bits of gold and silver on the ground as an offering to Viracocha. In case the man's ancestors were angry, the curer ordered him to set food on their tombs or in some designated part of the house and to pour some chicha on the ground. If the sick man were well enough to walk, the curer made him go to a place where two rivers met and wash his body with water and white maize flour; if he were too sick to walk, he was washed in the house.

When the curer decided that the sickness resulted from displacement of the internal organs or the presence of some foreign object in the body, he rubbed the body with guinea pig fat, massaged, or sucked. He sucked where pain was felt, then exhibited blood, worms, small stones, toads, bits of silver, straw, sticks, or maize and announced that the object had caused the pain.

If the disease were caused by black magic or poison, the sick man consulted a sorcerer for the cure. The chroniclers give no details about the methods employed, but they probably were very similar to those described for the modern *Aymara*. If the diviner declared that the illness was incurable, a man might sacrifice his own child in the hope that the angry supernatural being, satisfied with one life, would spare him.

A very elaborate cure was practiced when a member of the royal family or some other important person became seriously ill. The curers first purified a small room by cleaning it, sprinkling black maize flour on its floor and walls, and burning maize in it, then repeating the ceremony with white maize flour. The sick person was brought in and put to sleep, apparently by hypnotism, and the curers cut him open with crystal knives and took snakes, toads, and other foreign bodies out of his abdomen. The objects removed were immediately burned. The curers were paid with food, clothing, gold and silver ornaments, and similar gifts (Cobo, 1890–95, bk. 13, ch. 35; Poma, 1936, pp. 279–80).

Trepanation was probably still being practiced in the neighborhood of Cuzco at the time of the Conquest, but it is not mentioned in any of the chroniclers. Two series of datable skulls with trepanations are known from the Cuzco region: one, from near Calca, published by S. A. Quevedo (1942), is probably of Late *Inca* date; the other, from a cemetery at Yucay, is probably Early *Inca* (University of Cuzco Expedition, July–August 1943). Most of the trepanned skulls in the University Museum at Cuzco are probably of *Inca* date also. The collection includes two skulls with trepanations made by drilling an oval row of slightly overlapping round holes, each hole about ¼ inch in diameter. Another skull was trepanned by sawing two pairs of parallel cuts, one pair crossing the other. The patient was probably in a drunken stupor when the operation was performed. Examples of healed trepanations are numerous, and some skulls show very large trepanations, or several successive operations, all apparently successful.

Sorcery.—Practitioners of black magic were hated and feared by the *Inca*. As they practiced in secret, no one knew which of his neighbors might be weaving spells against him. As these sorcerers were usually poison experts, their neighbors' fears were sometimes well grounded. Murder by magic or poison was one of the most heinous crimes under *Inca* law, and conviction meant death for the sorcerer and all his family (Cobo, 1890–95, bk. 12, ch. 26). Sorcerers were called KAWCO in *Quechua*; in modern times, the *Aymara* word LAYQA is more generally used.

Sorcerers used the principles of sympathetic and contagious magic, and worked with human exuviae (teeth, hair, nails, etc.), shells, animal figurines and amulets, toads, animal heads, small dried animals, large hairy spiders kept in closed jars, roots, herbs, and ointments. (See Bingham, 1915 b, pp. 214–15; 1930, figs. 112–14). A sorcerer who wished to bring sickness or death to an enemy might make an image of him, dress it in his clothes, hang it up, and spit on it, or he might burn a figurine of clay or wax representing the enemy, or otherwise mistreat it (Cobo, 1890–95, bk. 13, ch. 38). Another method was to take a toad, sew up its eyes and mouth with thorns, tie its feet, and bury it in a place where the enemy would be likely to sit down. The suffering of the toad was supposed to pass into the enemy.

Another method was to spin a thread of black and white wool, twisting it to the left (the reverse of the customary direction), and then place a noose of it on a path where the enemy might pass so that it would catch his foot. A sorcerer could spoil a man's harvest by burning a bundle of maize ears, fat, thorns, and some of the enemy's hair in his field with the proper ceremonies (Poma, 1936, p. 275). The power of the "devil" was so real to the Spanish writers of the 16th and 17th centuries and this sort of black magic was so similar to that practiced in their own country towns that they were as reluctant to write about it as the Indians were to explain it.

Some sorcerers furnished love charms for a price. The charms, of many different kinds (called generically WAQAÑKI), were made of feathers, thorns, stones, or herbs, and had to be secreted in the garments or bed of the person whose affections were desired. (Cobo, 1890–95, bk. 13, ch. 36; Poma, 1936, p. 276; Morúa, 1922–25, bk. 3, ch. 47.)

MYTHOLOGY AND LITERATURE

Myths and legends.—The *Inca* tales that have come down to us are all either origin myths or historical legends; there is no indication in the chroniclers of the existence of animal fables such as the modern *Quechua* and *Aymara* tell. It would be possible to make a very good case for the European origin of these animal fables, on the basis of the distribution of common motives and the silence of all the older writers, but the question is better left open. Peruvian scholars in particular are taking a new interest in folklore, and it is to be hoped that their work will produce fresh evidence bearing on this and other doubtful points.

Inca origin myths are attempts to explain the existence of natural objects, shrines, and human customs, and from their very nature they varied greatly from one village to another. The best-known series is that current at Cuzco in the 16th century, which, except as otherwise indicated, is given here. Garcilaso is not cited because his testimony on religion and history is extremely untrustworthy. The mass of source material is so great that space permits only brief summaries of some of the most important myths.

The Creation by Viracocha.—Viracocha, the Creator (i. e., ILYA TIQSI WIRAQOCA PACAYACACIQ), made a world of earth and sky and left it in darkness. Then he decided to make people to live in it, so he carved statues of stone in the shape of giants and gave them life. After a while, when the giants displeased him, he destroyed them by turning some to stone at Tiahuanaco, Pucara, and other places, and overwhelming the rest with a great flood (ONO PACAKOTI, "water cataclysm"), from which he saved only two assistants.

Then he created a new race of his own size to replace the giants he had destroyed. First he gave the world light by causing the sun and moon to emerge from the Island of Titicaca. The moon was originally brighter than the sun, but the sun was jealous and threw a handful of ashes in the moon's face, which obscured her brilliance. Then Viracocha went to Tiahuanaco, where he modeled animals and men out of clay, each species and tribe in its proper shape. On the models of men, he painted the clothes that they were to wear. Then he gave men their customs, food, languages, and songs, and ordered them to descend into the earth and emerge from caves, lakes, and hills in the districts where he instructed them to settle. Viracocha himself set out toward the north with his two assistants to call the tribes out of the earth and to see if they were obeying his commands.

Viracocha took the central route along the line of the *Inca* mountain highway, and sent one assistant to follow the Coast and the other to inspect the edge of the eastern forests. Many people along the way did not recognize Viracocha because he appeared to be only an old man with a staff. At Cacha, in the province of Canas (now San Pedro near Sicuani), the people came out to stone him because they did not like strangers. Viracocha called down a fire from heaven which began to burn the rocks on the hill around him and frightened the people, who begged him to save them. He took pity on them, and put the fire out with a blow of his staff. The burned hill remained as a reminder of his power and mercy, and the *Canas* built a shrine in his honor. (A great temple was afterward built there by the *Inca.*) Then Viracocha went on to Urcos near Cuzco, where he summoned the inhabitants to come out of a mountain. They honored him during his visit, and later built a shrine in his honor on the mountain. He went to Cuzco, and continued northward to the province of Manta in Ecuador. Here he said farewell to his people, and set out across the Pacific walking on the water. (Betanzos, 1880, chs. 1–2; Cieza, 1880, bk. 2, ch. 5; Sarmiento, 1906, chs. 6–7; Molina of Cuzco, 1913, pp. 118–123; Cobo, 1890–95, bk. 13, ch. 2.)

COMMENTS: Besides explaining the origins of the heavenly bodies, animals, and men, this myth accounts for the *Inca* shrines of Titicaca, Cacha, and Urcos, the prehistoric stone sculpture at Tiahuanaco and Pucara, and the origin legends of the various tribes. The "burned hill" at Cacha is a mass of cinders and lava from the Volcano of Tinta. (See Gregory, 1916, p. 100.) The shrine there is illustrated by Squier (1877, pp. 405–412) and Means (1931, fig. 170). Garcilaso's account of it is of doubtful value (1723, pt. 1, bk. 5, ch. 22).

A striking feature of the story is its comparatively late character. It deals with places which were not incorporated into the *Inca* Empire until the reign of Topa Inca, and it provides an explanation for the diversity of local origin myths which the *Inca* were more likely to have devised after the formation of their Empire than before. The story is probably based on a number of older local legends put together under *Inca* supervision at the end of the 15th century. Mythology is only static when people no longer believe in it. The most important episodes take place in *Aymara* territory because, lacking a general creation myth of their own, the *Inca* took over *Aymara* elements of the story that were adapted to their purpose of explaining the diversity in Andean origin legends.

The origin of the Inca.—About 18 miles (30 km.) southeast of Cuzco in the modern province of Paruro is a place (PAQARI-TAMPO, "origin tambo") where there is a hill (TAMPO-T'OQO, "tambo hole"), in which are three small caves. (One of the side caves was called MARAS T'OQO, the other SOTIQ-T'OQO, and the middle one QHAPAQ-T'OQO.) From the side caves emerged the ancestors of several of the *Inca* ayllus, and the founders of the *Inca* royal family came out of the middle one. There were four brothers (entitled AYAR, "wild quinoa"), and four sisters (called Mama, "mother"). The men's names were: Manco (Ayar mañko); Ayar awqa, "warrior"; Ayar kaci, "salt"; and Ayar oco, "chili pepper". The women's names were: Mama oqlyo, "pure"; Mama *huaco; Mama ipa qora, "aunt weed"; and Mama rawa. These eight brothers and sisters gathered a following and set off on the road to Cuzco in search of new and better farm lands. They moved slowly, staying for a year or two at various towns along the way. At one such place (tampo-kiro, "tambo tooth"), a son (named Sinci roq'a) was born to Manco and Mama oqlyo. During the journey, Ayar kaci made himself greatly feared by his feats of strength. He climbed the hill of Huanacauri (Wanakawri), and hurled slingstones at neighboring hills with such force that he opened ravines where none had been before.[36] His brothers and sisters, determined to get rid of him, persuaded him to return to the cave (qhapoq t'oqo) and bring out the sacred llama of the *Inca* (napa), some gold cups, and some seed which they had left there. They sent a man with him to shut him into the cave when he had entered it, which was accomplished as planned. He has remained sealed in the mountain. The rest of the party then decided that each of the men should undertake a specific function. Ayar oco remained at Huanacauri, where he turned himself into stone and became the cult object of the *Inca* shrine there, having first given Manco instructions for performing the men's maturity rite. Ayar awqa went to the site of Cuzco, which had been chosen for settlement, and turned himself into a field-guardian huaca (hence he was called qosqo wañka, "field guardian of Cuzco"). Manco was left to found the new town.

The site of Cuzco had been chosen with the aid of a golden staff which the brothers carried for testing the ground. They found the land just east of the modern city to be fertile and well suited for cultivation and decided to build their houses where the Temple of the Sun was later built. As the whole valley, however, was already occupied by other peoples, the ancestors of the *Inca* had to take it by force. Near the fertile fields they had chosen lived a small tribe called *Hualla* (Walya, *Gualla*); where they wanted to build their houses lived an ayllu (sawasiray); and just to the north lived the *Alcahuiza*, the most powerful of the indigenous peoples. Mama Huaco attacked the *Hualla* with a single heavy bolas weight on the end of a cord and slew one *Hualla*. She cut out his entrails and blew air into his lungs, a gruesome spectacle which sent the terrified *Hualla* fleeing from the valley of Cuzco to escape the ferocious invaders. After several skirmishes, the ayllu sawasiray was also driven out, and Manco and the four women founded their town at the site of the Temple of the Sun, where AYAR AWQA had taken possession. (Betanzos, 1880, chs. 3–5; Cieza, 1880, bk. 2, chs. 6–9; Sarmiento, 1906, chs. 11–14; Cobo, 1890–95, bk. 12, chs. 3–4; Pachacuti, 1879, pp. 240–246; Poma, 1936, pp.80–87; Garcilaso, 1723, pt. 1, bk. 1, ch. 18; Morúa, 1922–25, bk. 1, ch. 2.)

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[36] This part of the story, minus the name of ayar kaci, is still part of the local folklore. In 1941, an old Indian living near Huanacauri told me that in ancient times an awki (hill spirit) stood on that hill and made the neighboring ravines with casts of his sling. Compare Betanzos, 1880, ch 3; Cieza, 1880, bk. 2, ch. 6; Sarmiento, 1906, ch. 12.

COMMENTS: This seems to have been the most common form of the legend in Cuzco, to judge by the number of independent sources which repeat it. The story explains the origin of the *Inca* royal dynasty, of sister-marriage by the ruler, of three important *Inca* shrines, of the maturity rite, and of the sacred llama. The skepticism which naturally arises with greater experience of the world was not absent in Cuzco under the later Emperors, and the old legend was re-rationalized in rather cynical terms, producing what Means has called the "Shining Mantle" story. According to the cynics, Manco Capac, or Ayar Manco, was a mythical character. The founder of the *Inca* royal house was Sinchi Roca (Manco's son in the traditional story), who was imposed on the gullible people by an elaborate trick of his mother's. She spread the word that the Sun was about to send them a ruler, and then, when all had assembled to see, brought forth her son from the mouth of a cave dressed in cloth covered with golden bangles (*chaquira, "beads"). Dazzled by the vision, the people accepted the boy as a heaven-sent ruler. (See Means, 1931, pp. 215–219 for references.) Neither the original legend nor the Shining Mantle story can be accepted as a historical account of *Inca* origins.

Another well-known version of the story of Manco Capac is that preferred by Garcilaso. It makes Manco a culture hero sent by the Sun from the Island of Titicaca to instruct the people in the arts of life (Garcilaso, 1723, pt. 1, bk. 1, chs. 15–17). If it really was told to Garcilaso by one of his old *Inca* relatives, as Garcilaso claims, and is not a fabrication of his own, it represents an interesting confusion of the cycle of Viracocha with the cycle of Manco Capac.

The pages of Betanzos, Cieza, and Sarmiento are treasure houses of delightful hero-tales, probably preserved in pre-Conquest times in *Quechua* narrative verse. The volume of such material makes it impossible to summarize the whole here, but a sample may be of interest.

The deeds of Mayta Capac.—Lloque Yupanqui, Manco Capac's grandson, had grown old without having any children. His people were very much distressed, and made great sacrifices and consulted the oracles, one of which replied that Lloque Yupanqui would yet have an heir. The people were very happy, and persuaded the old chief to try again. Although he was so old that it was considered miraculous, he begot a son, Mayta Capac, who was born in only 3 months, and already had his teeth and was very strong. At the end of a year, he was as big as a boy of 8, and at 2 years he began to fight with really big boys for amusement.

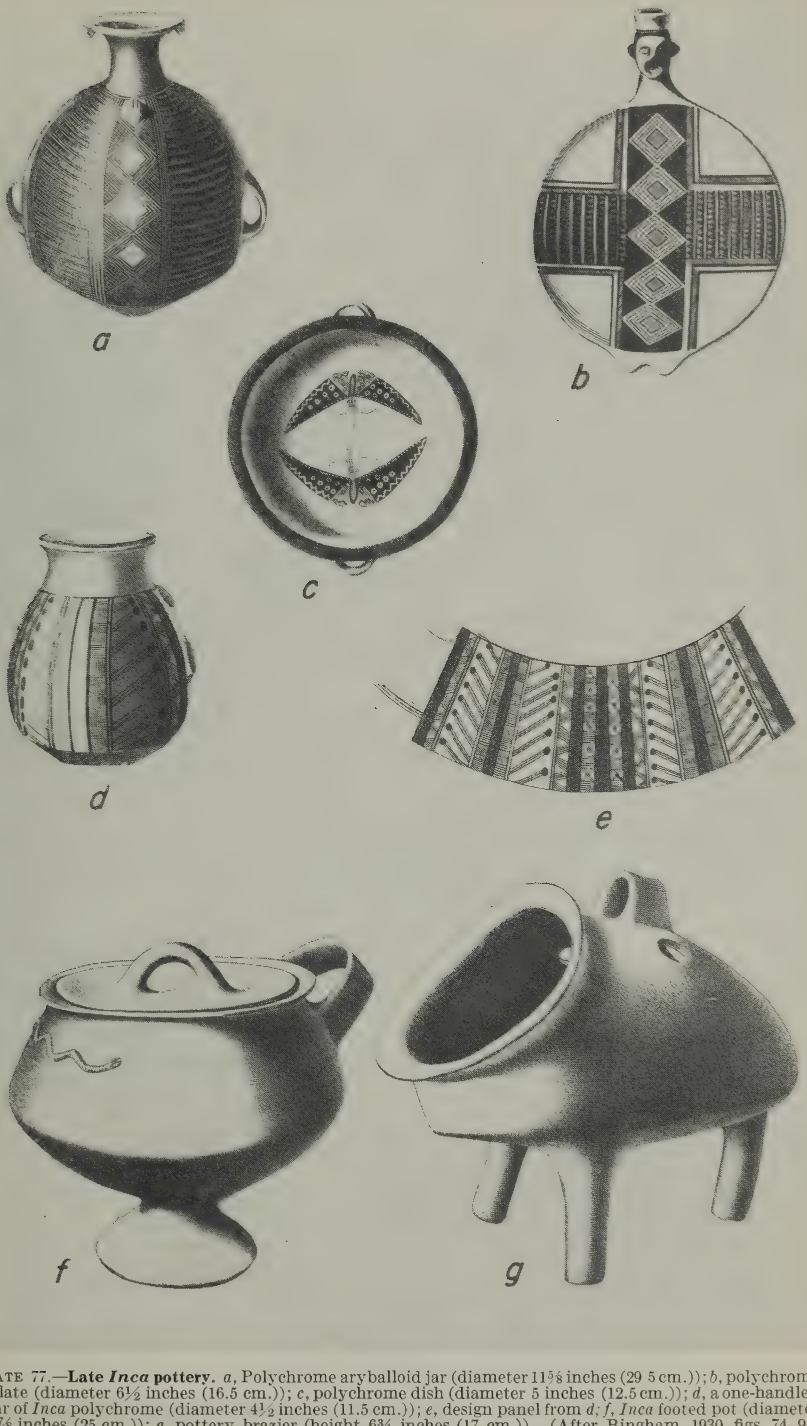

Plate 77.—**Late *Inca* pottery.** *a*, Polychrome aryballoid jar (diameter 11⅝ inches (29 5 cm.)); *b*, polychrome plate (diameter 6½ inches (16.5 cm.)); *c*, polychrome dish (diameter 5 inches (12.5 cm.)); *d*, a one-handled jar of *Inca* polychrome (diameter 4½ inches (11.5 cm.)); *e*, design panel from *d*; *f*, *Inca* footed pot (diameter 9⅞ inches (25 cm.)); *g*, pottery brazier (height 6¾ inches (17 cm.)). (After Bingham, 1930, figs. 74, 95, 122, 112, 113, 114, 104, 125.)

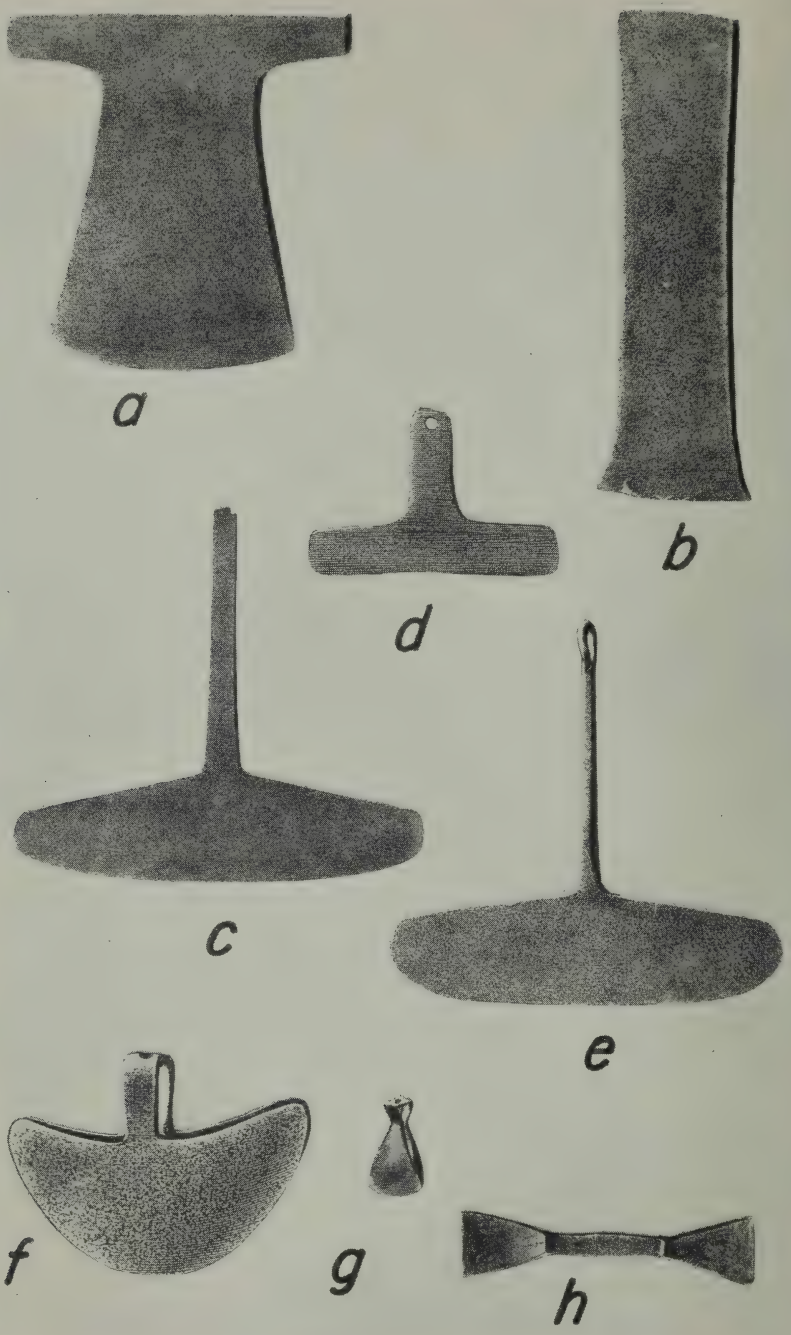

PLATE 78.—***Inca* bronze tools.** *a*, Ax; *b*, chisel; *c*, knife, or tumi (length of blade 2½ inches (6.5 cm.)); *d*, knife (length of blade 5 inches (12.4 cm.)); *e*, knife (length of blade 5 inches (12.5 cm.)); *f*, tweezers (length 1⅞ inches (4.7 cm.)); *g*, tweezers (height 1 inch (2.4 cm.)); *h*, unfinished tweezers. (After Bingham, 1930, figs. 163, 165, 168, 157.)

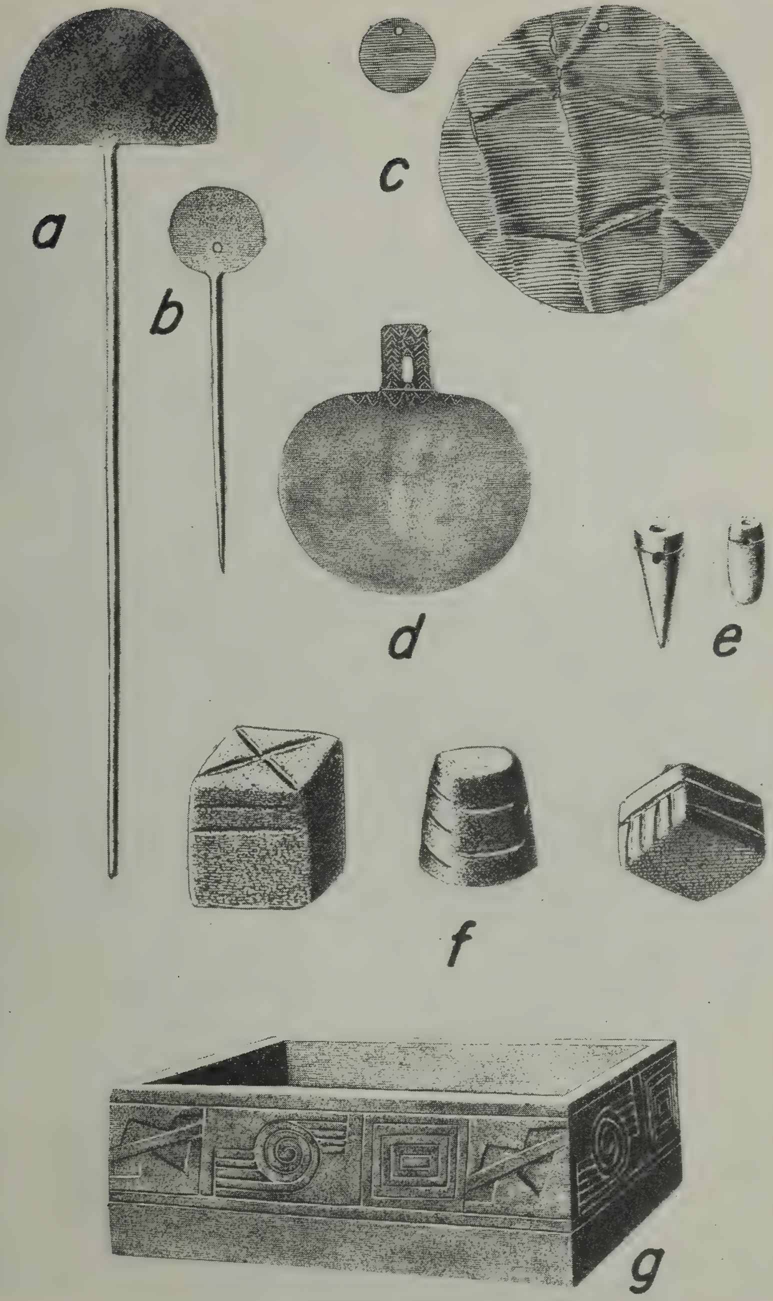

PLATE 79.—**Miscellaneous *Inca* artifacts.** *a,* Bronze shawl pin, or tupu (length 9½ inches (24 cm.)); *b,* silver shawl pin (length 3 inches (7.7 cm.)); *c,* silver chaquira bangles; *d,* bronze mirror (diameter 2⅞ inches (7.3 cm.)); *e,* stone "plumb bobs"; *f,* pottery dice (height range from approx. ½ to ¾ inch (1 to 1.5 cm.)); *g,* carved stone bowl (length 3¾ inches (9.5 cm)). (After Bingham, 1930, figs. 155c, 152, 158, 137, 178, 172, 198.)

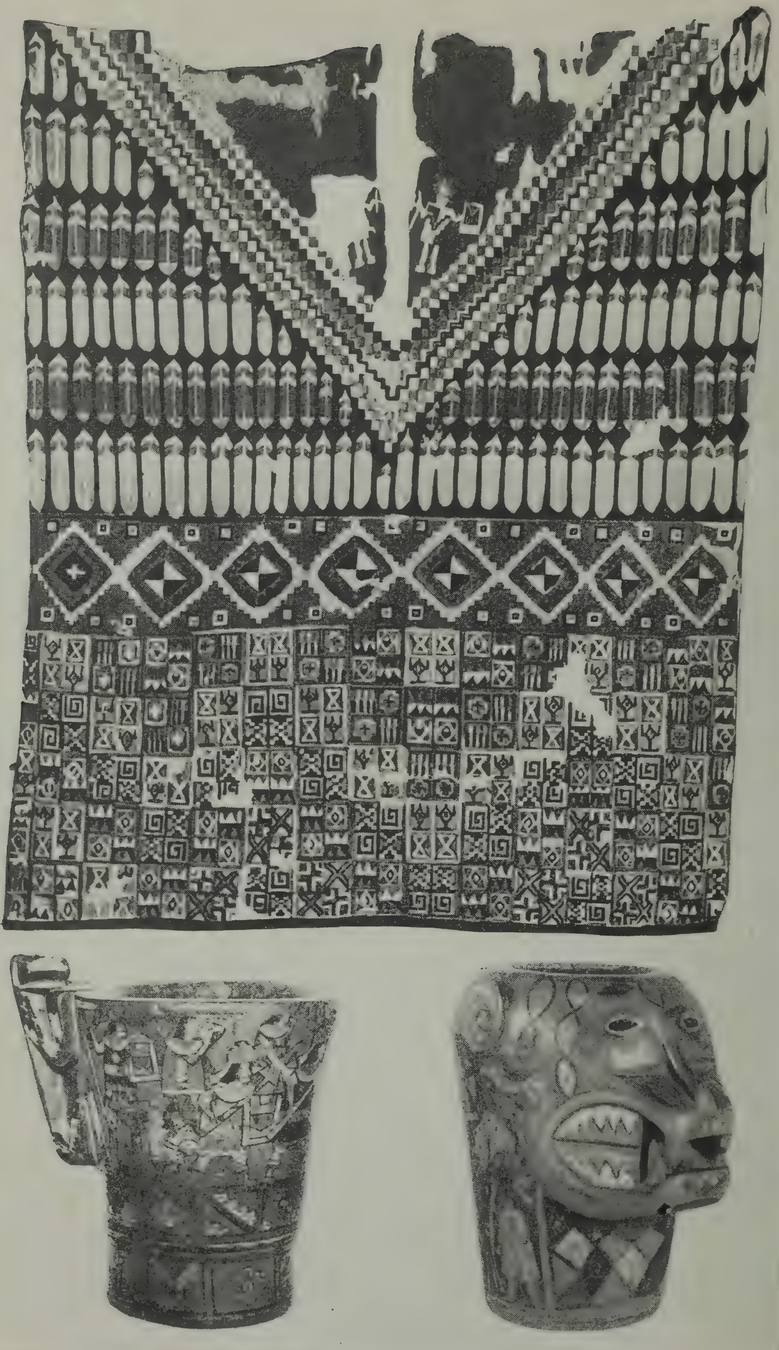

PLATE 80.—***Inca* tunic and painted wooden goblets.** *Top:* Tapestry from the Island of Titicaca. (After Bandelier, 1910, pl. 62.) *Bottom (left):* Lacquered goblet. (After Musée d'Ethnographie, Paris, 1933, pl. 4.) *Bottom (right):* Animal effigy head goblet. (Courtesy American Museum of Natural History.)

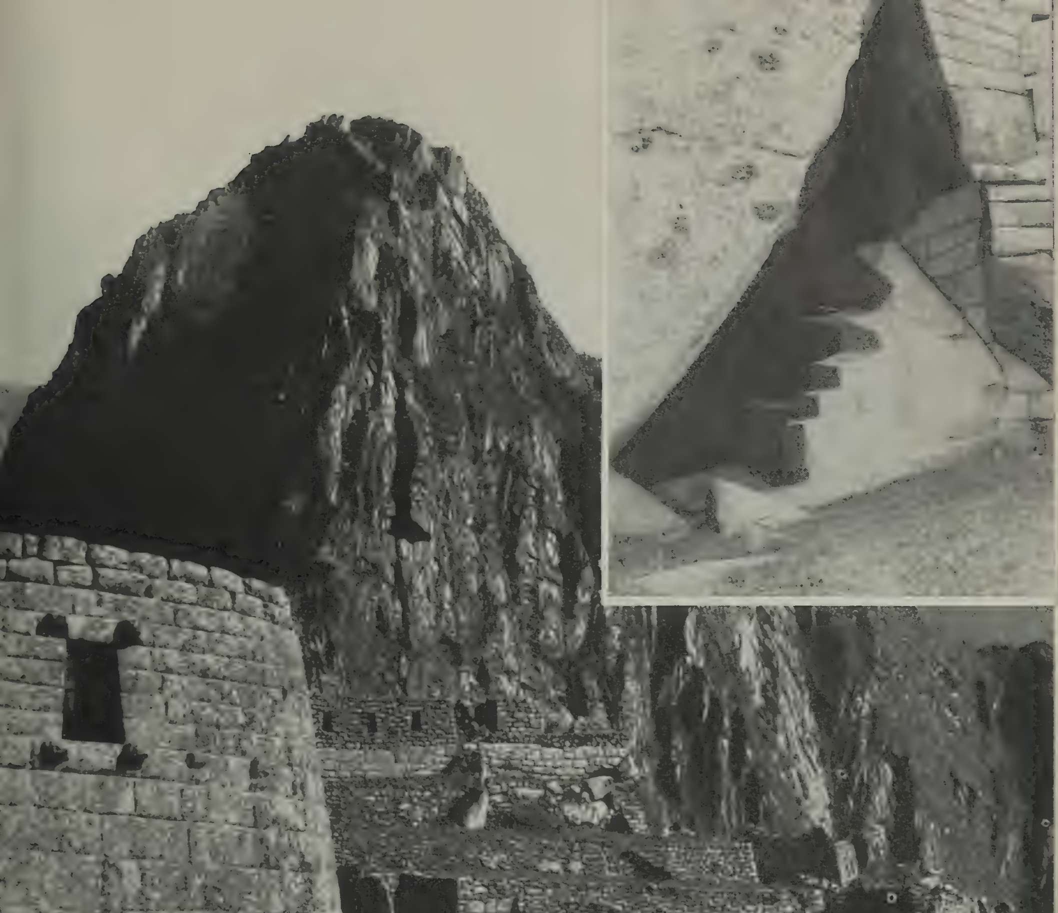

Plate 81.—**Machu Picchu stone masonry and architecture.** *Top* (*right*): Monolithic carving combined with ashlar masonry. (Courtesy Truman Bailey.)

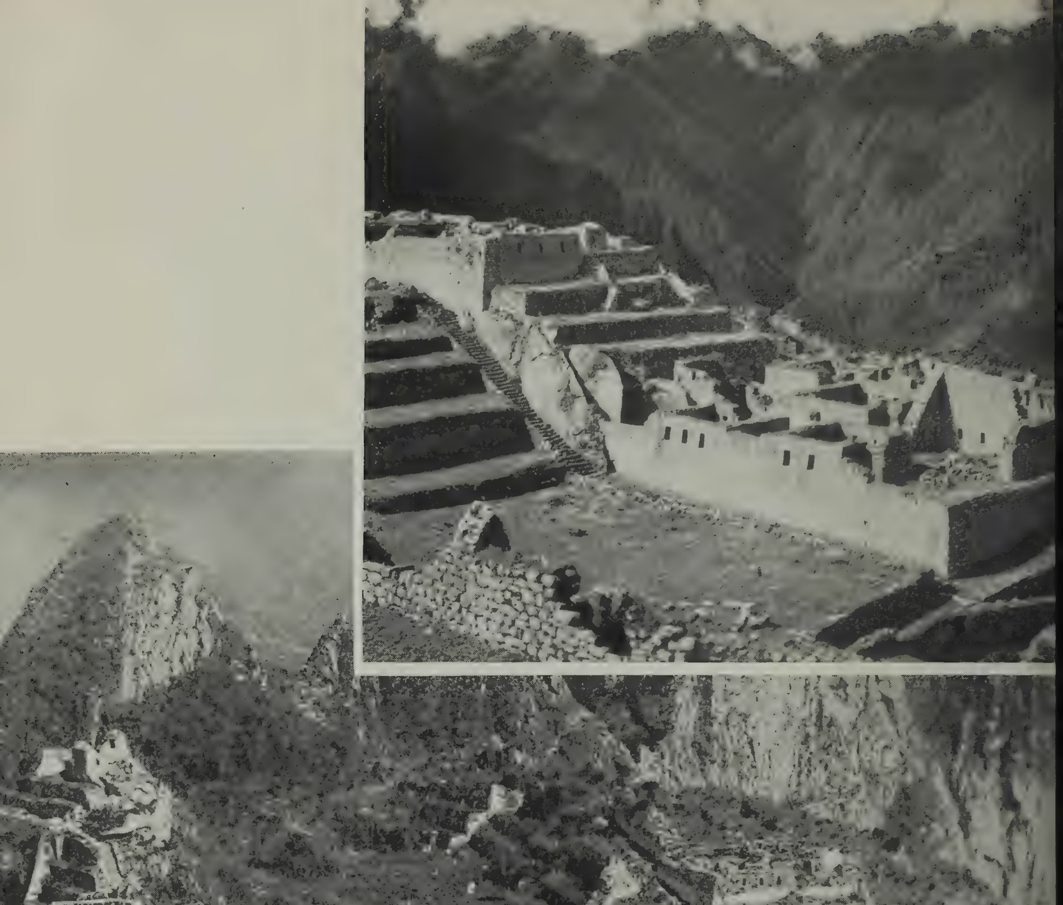

Plate 82.—**Two views of Machu Picchu.** (Courtesy Truman Bailey and courtesy James Sawders.)

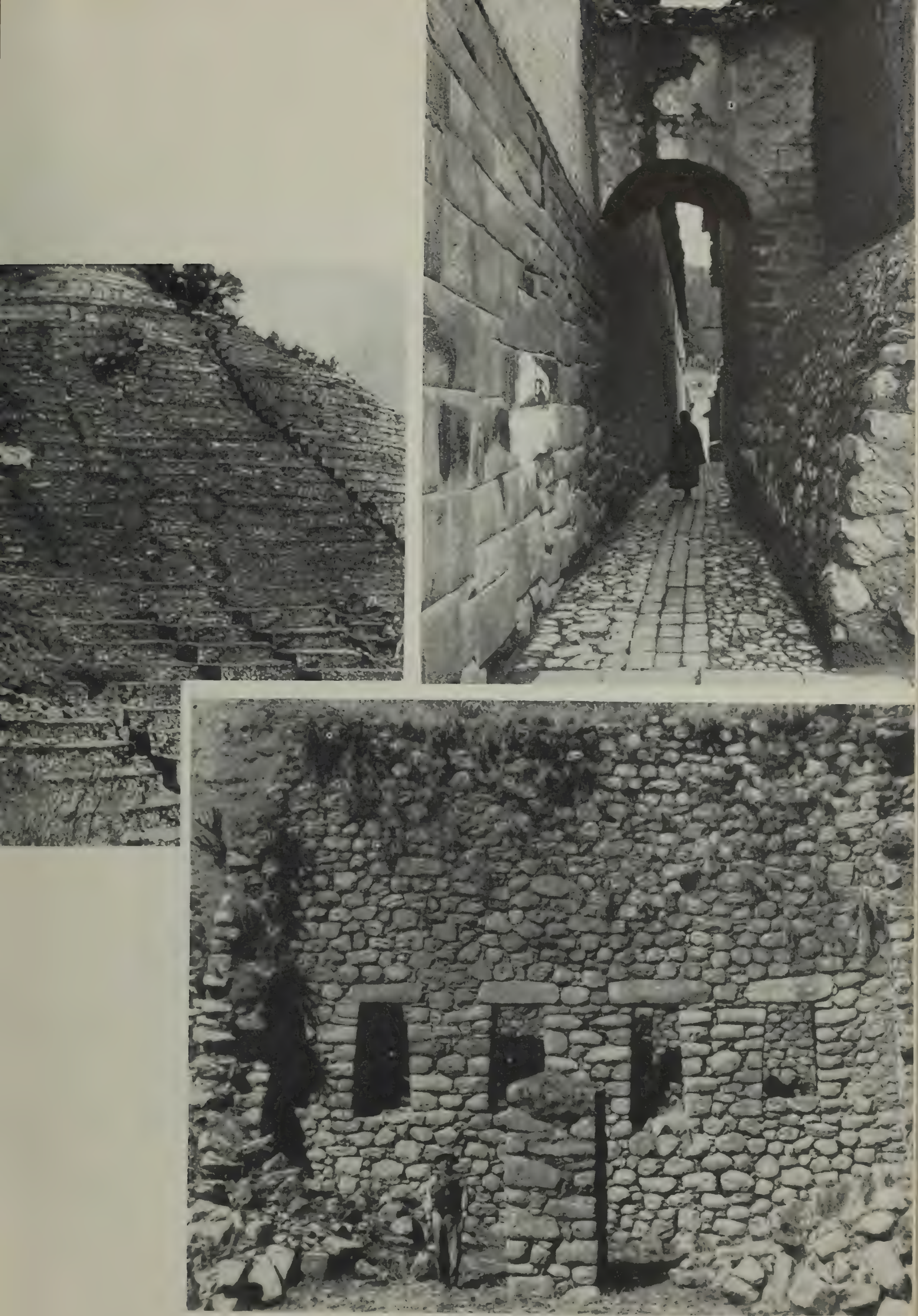

Plate 83.—***Inca* architecture.** *Top (left):* Agricultural terraces at Inty Pata. (Courtesy Paul Fejos.) *Top (right):* Polygonal wall in Cuzco, supporting modern buildings. (Courtesy Grace Line.) *Bottom:* A wall at Chachabamba. (Courtesy Paul Fejos.)

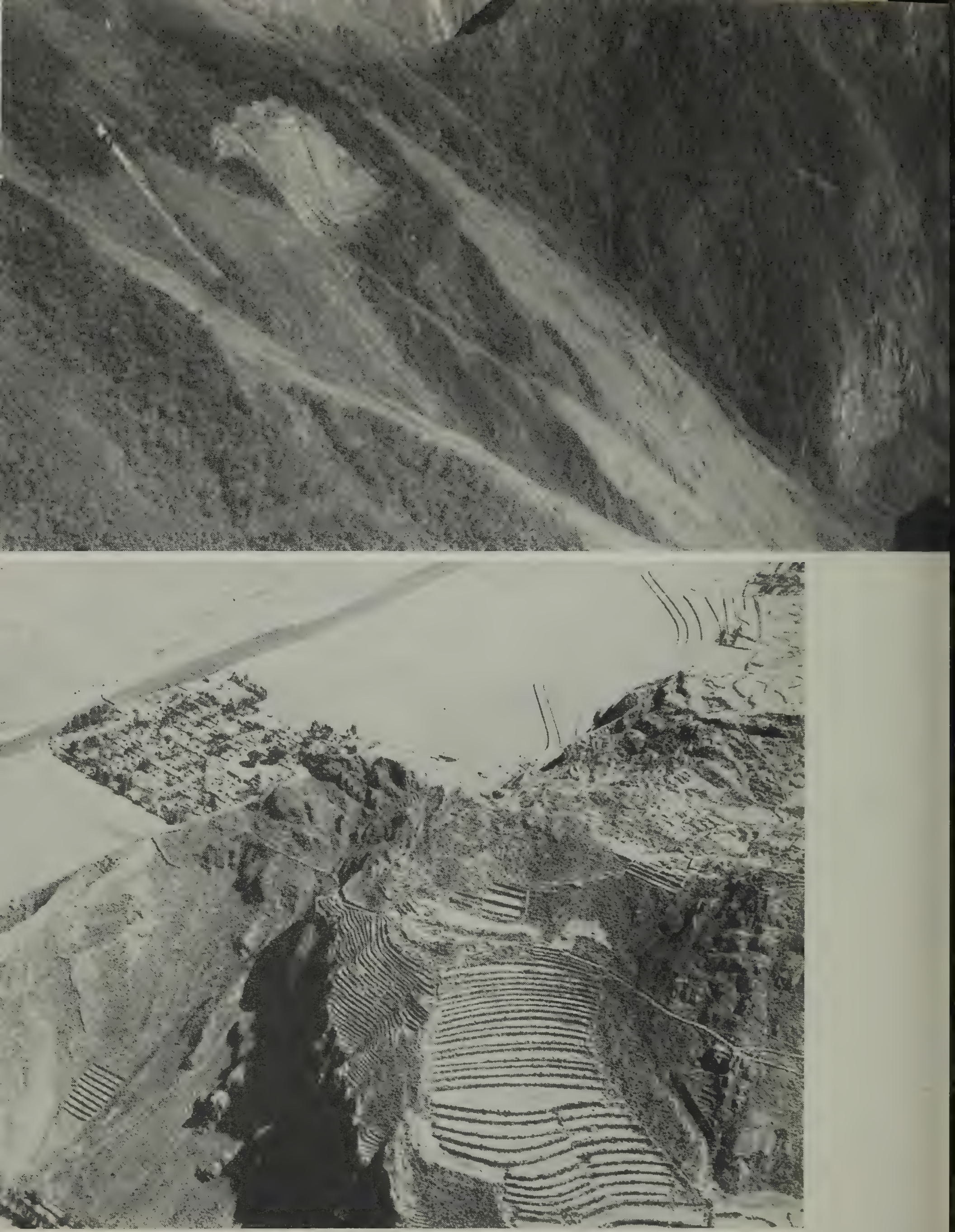

PLATE 84.—***Inca* sites and terrain.** *Top:* Inty Pata dwarfed by the great slopes of the forested mountains. The expansion of the agricultural *Inca* was not blocked by the most precipitous terrain. (Courtesy Paul Fejos.) *Bottom:* Pisac, ancient town on ridge at upper right; modern town lies below. (Courtesy National Geographic Magazine.)

The *Inca* were then living at uneasy peace with their nearest neighbors, the *Alcahuiza*. One day when Mayta and some of his friends were playing with the *Alcahuiza* boys, they fought over who should draw water first from a spring, and Mayta broke the leg of the *Alcahuiza* chief's son. Furious, the *Alcahuiza* sent 10 warriors to raid the *Inca* town and kill Mayta and his father. Mayta, who was playing ball in his courtyard when the raiders arrived, turned on them immediately and killed two with the balls with which he was playing. The rest fled precipitately.

Lloque Yupanqui, man of peace, begged his son to stop provoking the neighbors, but the *Inca* warriors were spoiling for a fight and told the old man to let his son alone. The *Alcahuiza* now came in force and Mayta's forces repulsed the attackers in a pitched battle. The *Alcahuiza* next attacked the *Inca's* house compound, but without success. Feeling that he had now sufficiently proved his manhood, Mayta went through the maturity rite and became a full-fledged warrior. In a final pitched battle, a hailstorm broke over the *Alcahuiza*, and the *Inca*, encouraged by this sign of divine favor, decisively defeated the enemy and captured their chief, ending the bitter struggle. (Sarmiento, 1906, ch. 17; Cieza, 1880, bk. 2, chs. 32-33; Cobo, 1890–95, bk. 12, ch. 7.)

COMMENTS: A whole cycle of stories of this sort surrounds the figure of Yahuar Huacac, seventh *Inca* ruler, and others cover the *Chanca* war in the time of Viracocha and Pachacuti. Indeed, dramatic elements of mythical character continued to appear in *Inca* narrative poetry until at least the time of the Conquest. The following is another sample.

The coming of the pestilence.—One midnight when Huayna Capac was campaigning around the Gulf of Guayaquil, he had a vision in which he saw the camp surrounded by half a million ghosts, the souls of living men, arrayed as if to attack him. In great fear, the Emperor took his army back to Quito, where they celebrated the festival of QHAPAQ RAYMI. Then one day, a messenger arrived wearing a black cloak and carrying a small covered box (P'OTI) with the cover fastened. The Emperor ordered him to open it, but the messenger begged his forgiveness, saying that he came by command of the Creator, and that the Emperor himself should open the box. Huayna Capac unfastened the cover, whereupon a host of moths and butterflies came out and disappeared into the air. They were the pestilence, which swept the *Inca* camp until even the Emperor himself died of it (Pachacuti, 1879, p. 307).

COMMENTS: These examples indicate the character and scope of *Inca* folklore. Abundant materials have been preserved, but never carefully studied. In addition to the authors cited, Morúa, (1922–25) and Cabello (ms. and 1840) contain much folklore material. Considerable material has also been preserved for other parts of the Andean region, especially the *Yauyo* (see Avila, 1939; RGI, 1881–97, 1: 70–72), the central Coast (Calancha, 1638, bk. 2, ch. 19), the north Coast (Calancha, 1638, bk. 3, chs. 1–4; Cabello, ms. III, 17; Rubiños, 1936, pp. 361–363); the north Highlands (Religiosos Agustinos, 1865), the *Huanca* (Cieza, 1554, bk. 1, ch. 84), and the *Cavana* (RGI, 1881–97, 2: 40). Comparative material for the *Aymara* is also available.

Literature.—*Inca* literature was unwritten, with all the implied limitations of form and constant modification. As only small fragments were recorded by the Spaniards at the Conquest and as the continuity of the oral tradition was broken during the 16th and 17th centuries, there is little hope of recovering much pre-Conquest literature not known today. Existing fragments and the references in the chroniclers are sufficient, however, to give an impression of what has been lost.

The *Quechua* language has certain marked characteristics which would be bound to influence any literary production composed in it. Nearly all *Quechua* words are accented on the penult, which gives a certain rhythmical character even to prose. Then again, *Quechua* has a very small number of phonemes, and these are carefully arranged in surprisingly formal patterns in true *Quechua* words. As a result, it is very difficult for *Quechua* to borrow words from phonetically different languages; ancient borrowings are nearly all from *Aymara*, which has almost the same sounds as *Quechua*. When a new word is necessary, it is made up from existing elements, as in German, rather than borrowed from a foreign language, as in English or Spanish. As if to compensate for its rigid phonetic pattern, *Quechua* allows the greatest freedom in word formation. A noun can be made from a verb by merely adding nominal suffixes instead of verbal suffixes to the stem, and the finest gradations of meaning can be expressed by inserting affixes between the stem and its grammatical ending. The precision of feeling and emotion that is possible in *Quechua* was so frightening to the Spanish priests, whose theology was carefully thought out in the broad and matter of fact terms of Latin, that many of them hesitated even to catechize the Indians in their own language.

The surviving fragments of *Inca* literature can be grouped under the four headings of prayers and hymns, narrative poems, dramatic pieces, and songs. The prayers and hymns are justly noted for their lofty thought and beauty of expression. A considerable number have been preserved by Molina of Cuzco, Pachacuti, Guaman Poma, and others, and excellent examples have been published in English by Means (1931, pp. 437–439). For instance:

> O conquering Viracocha!
> Ever-present Viracocha!
> Thou who art without equal upon the earth!

Thou who art from the beginnings of the world until its end!
Thou gavest life and valour to men, saying,
"Let this be a man"
And to the woman, saying,
"Let this be a woman."
Thou madest them and gavest them being.
Watch over them, that they may live in health and in peace.
Thou who art in the highest heavens,
And among the clouds of the tempest,
Grant them long life
And accept this our sacrifice,
O Creator.
[Translation by Means from the Spanish of Molina of Cuzco.]

The great bulk of *Inca* literature seems to have taken the form of narrative poems (Cieza, 1880, bk. 2, chs. 11, 12; Sarmiento, 1906, ch. 9). Mythology, legend, historical romance, and history were handed down from generation to generation in the form of long poems (ballads, sagas, and little epics) which were learned word for word and repeated at public gatherings until everyone was familiar at least with their content. Because the ideas of *Inca* religion were so thoroughly woven into these poems, they were frowned on by the missionaries and none was ever literally recorded. However, summaries of several were preserved in Spanish prose by Sarmiento, Betanzos, and Pachacuti. There are passages in Sarmiento's text which are strongly reminiscent of the medieval Spanish "prosificaciones" of older epic material. The stories of Mayta Capac, Yahuar Huacac, the war with the *Chanca*, and the civil war between Huascar and Atahuallpa were almost certainly summarized by Sarmiento's interpreters from *Quechua* narrative verse. In the account of the *Chanca* war, the anonymous character of a *Quilliscachi* Indian is introduced for the sole purpose of providing a dramatic link between the two camps and reporting the events of the other camp when necessary in order to avoid too frequent changes of scene.

Although no actual examples of pre-Conquest narrative poems in *Quechua* have been preserved, two ballads of the 1570's preserved by Morúa give some idea of the ancient forms. Unfortunately, the published text is so corrupt that considerable study will be necessary before the two fragments can be adequately translated, and Morúa's translations are unduly free (1922–25, bk. 2, ch. 15). The meter is trochaic tetrameter. As similar meter is common in Spanish also, there has been some debate as to whether its occurrence in *Quechua* verse was the result of Spanish influence. Much more early text material is necessary to settle the problem.

The nature of *Inca* drama is a thorny problem, revolving for the most part around the question of the antiquity of the play called "Ollanta," of which some five 18th- and 19th-century manuscripts are known to exist. The play, though often proclaimed a masterpiece, has a weak plot, unconvincing characters, and a stilted dialogue. Middendorf, Means, and Rojas have shown very convincingly that the play in its present form is not older than the 17th century and may be as late as the middle of the 18th. Parts of it, especially the songs, may, however, be very much older, and the story may be derived from an ancient legend (Rojas, 1939; Means, 1931, pp. 440–441 and references).

Garcilaso describes *Inca* "comedies" and "tragedies" in a way that sounds just a little too European to be plausible, but Cieza and Acosta explain that *Inca* dramatic pieces were parts of public dances, and probably derived from them. At most, they consisted of a narrative or a dialog to be sung by one or two actors, with a chorus to answer them. (Acosta, 1940, bk. 6, ch. 28; Cieza, 1880, bk. 2, ch. 12; Garcilaso, 1723, pt. 1, bk. 2, ch. 27.) The missionaries took advantage of the Indians' interest in drama and, even before 1560, wrote a number of Spanish-type plays in *Quechua*, which were performed by Indian actors. They were "autos," plays whose purpose was first to point a moral and only second to amuse. The best-known example is probably "El Pobre más Rico" (Garcilaso, 1723, pt. 1, bk. 2, ch. 28; Basadre, 1938, pp. 135–141).

All the types of *Inca* literature so far considered suffered heavily from Spanish influence or repression since the Conquest, but not so *Quechua* song. Indeed, the influence has been so heavily the other way that nearly all popular poetry (as distinguished from conscious literary effort) in the Andean countries today is heavily Indianized in feeling and expression, whatever the language in which it is sung. Some beautiful examples of Spanish poetry in *Quechua* style are given by d'Harcourt (1925).

Quechua examples of proved antiquity are very scanty. The oldest is a well-known verse remembered by Garcilaso (1723, pt. 1, bk. 2, ch. 27) from before 1560:

In this place
Thou shalt sleep
Midnight
I will come.

Sarmiento (1906, ch. 47) translates a verse of a song from a dramatic or narrative piece on the death of Pachacuti, which is almost certainly pre-Conquest:

I was born like a lily in the garden,
And so also was I brought up.
As my age came, I have grown up,
And, as I had to die, so I dried up
And I died.

Much of the poetry scattered through the pages of Guaman Poma is either ancient or composed in the ancient style in the century following the Conquest. The following verses are of the second type (Poma, 1936, p. 317. From the Spanish translation of J. M. B. Farfán (Basadre, 1938, p. 85), modified by comparison with the original):

What evil fortune separates us, queen?
What barriers separate us, princess?
My beautiful one, for you are a chinchircoma flower,
In my head and in my heart I would carry you.
You are like the sparkling water,
You are like a mirror of water.
Why don't I meet my loved one?
Your hypocrite mother causes our unbearable separation;
Your contrary father causes our neglected state.
Perhaps, queen, if the great lord God desires,
We will meet again and God will bring us together.
The memory of your laughing eyes makes me sicken.
A little, noble lord, just a little!
If you condemn me to weeping, have you no compassion?
Weeping rivers, over the cantut lily, in every valley,
I am waiting for you, my little beauty.

Most *Quechua* poetry, ancient as well as modern, is nostalgic love poetry like the last example, filled with allusions to nature. Some of the associations sound strange in English, but seem perfectly natural to the Indians, to whom the plants and the birds, his associates in every-day life, have some traditional character perhaps derived from their use in medicine and in sorcery. There is much similar verse of great beauty and strength that could be easily collected by the student of folklore. Additional published texts can be found conveniently in d'Harcourt (1925) and Basadre (1938), where further references are given.

LORE AND LEARNING

Measurements.—Information on *Inca* units of measurement is relatively abundant, but so scattered and unsystematized as to give the impression that the *Inca* had no very precise standards. Actually, *Inca* skill in engineering works almost required a system of measurement at least as exact as that in use in 16th-century Europe.

Inca measures were based on parts of the human body. Measures of length probably began with the finger (ROK'ANA), but this unit is not specifically mentioned for *Quechua*, though Bertonio lists it for the *Aymara* (1879 a, pp. 174–180). Next came the *yuku, Spanish "jeme," the distance between the tip of the outstretched thumb and forefinger; about 5 or 6 inches (12–14 cm.). The span (K'APA) was equivalent to the Spanish "palmo" of 8 inches (20 cm.). The *Inca* also used the cubit (KHOCOC) of about 18 inches (45 cm.). The largest measurement based on the human body was the fathom (RIKRA) of about 64 inches (162 cm.), which was divided into 2 yards (1.8 m.)

(*sikya). The fathom was the standard measurement of land, and a measuring stick (COTA-K'ASPI) of this length was kept as a legal check (González, 1608, pp. 373, 127, 315, 326, and 117).

Measures of traveling distance were based on the pace (THATKIY), which is the most convenient unit for travelers on foot. A larger unit called TOPO ("measure") was used along the *Inca* roads, some of which had a "milestone" at every TOPO. The TOPO was approximately equal to 1½ Spanish leagues, or about 4½-miles. (Cieza, 1880, bk. 2, ch. 15; Polo, 1916 b, pp. 103–104; Acosta, 1940, bk. 6, ch. 17; Calancha, 1638, prologue; Bertonio, 1879 b, vocabulary.) Morúa says that a TOPO contained 6,000 paces (1922–25, bk. 3, chs. 24, 29). If both these equivalents are approximately correct, the *Inca* pace would have been about 4 feet (1.3 m.), counted from the time one foot was put down until the same foot touched the ground again (that is, two steps), which is a comfortable walking pace for a man of medium height. The chroniclers sometimes speak of "legua de indios" or "legua de acá" when they mean the TOPO. A passage in Pachacuti suggests that the *Inca* also used a larger unit called WAMANI (30 TOPO) in calculating road distances (1879, p. 300).

Area was also measured by the TOPO, but its size in this case is much less certain. Cobo says it was an area 50 fathoms long (about 300 ft.) and 25 fathoms (about 150 ft.) wide, and his statement is the most precise reference to its size that I have been able to locate (1890–95, 14, ch. 15). Garcilaso says that it equaled 1½ Spanish fanegas, but the fanega was so variable that it would be difficult to establish an exact equivalent (1723, pt. 1, bk. 5, ch. 3). If the fanega is taken at its modern Spanish value of about 1.59 acres, Garcilaso's TOPO would equal nearly 2.4 acres, and Cobo's only 0.8 acre. Baudin suggested that the *Inca* TOPO of area was simply the amount of land necessary to support a married couple without children, and hence varied with local conditions (Baudin, 1928, p. 90), but it was probably more precise. In the first place, Cobo gives exact dimensions for it in fathoms, which, González states explicitly, was the public land measure of the *Inca*. In the second place, the modern use of the TOPO suggests just such a definition as Cobo gives. At least two TOPOS are in general use in Highland Perú today; the TOPO of Cuzco, an area 88 by 44 varas (44 by 22 fathoms or about 264 by 132 feet), and the TOPO of Arequipa, a somewhat larger but similarly measured area. Jiménez de la Espada mentions a Colonial TOPO of 60 by 50 paces, but does not give his source (Cieza, 1880, p. 53, note *d*). Precisely measured units of land area are not likely to be the result of Spanish influence, for the common Spanish unit was the space in which a fanega of grain (about 1.6 bushels) could be sown! On the whole, the evidence favors Cobo's measurements. A study of the modern uses of the TOPO in Andean countries is much to be desired.

According to Cobo, the *Inca* had no standard liquid measure, but measured grain by the *ccullu (PHOQCA), which equaled approximately half of a Spanish fanega, or nearly 26 quarts (1890–95, bk. 14, ch. 15; also González, 1608, p. 293). It was usually a large calabash, but might be of wood or silver.

The *Inca* used the pan balance (AYSANA), and may have also used the steelyard, which is reported for the Coast of Ecuador (Estete, 1924, pp. 15–17), but seem not to have had a standard system of weights. The *Quechua* word for weight (WARKO), was used as an equivalent for the Spanish "peso" in Colonial times (González, 1608, p. 177).

The time of day was indicated by pointing to the position of the sun, and elapsed time by the distance the sun traveled. In addition, two *Quechua* phrases referred to the time needed to boil potatoes, which were used as equivalents for "hour": "One cooking so much" (HOK YANOY CHIKA), and "one cooking" (HOK WAYK'OY) (Cobo, 1890–95, bk. 12, ch. 37; González, 1608, pp. 197, 367).

Mnemonic devices.—As far as is now known, no form of writing was ever used in the Andean area before the Spanish Conquest, and it seems most unlikely that pre-Columbian writing will ever be discovered. Suggestions have been advanced that certain motives found on pottery, cloth, and stone represent hieroglyphic symbols, but these are all too few and too symmetrically placed to be conceivable as linguistic symbols. Some are probably heraldic motives and others may represent divination or games, but most are purely ornamental. The fact is that the Andean peoples possessed substitutes for writing which were so satisfactory that they probably never felt the need for anything more elaborate.

The *Inca* used an ingenious apparatus, the quipu (KHIPO, "knot"), which consisted of a main cord from which hung smaller strings with groups of simple knots on them at intervals (fig. 25, *d*). Frequently, subsidiary strings are attached to the main pendant strings, and often the strings are distinguished by color or method of twisting. A large number of quipus found in graves on the Central and South Coast (Chancay to Ica) have been studied by Locke, Nordenskiöld, and Altieri, who used the admirably detailed and specific accounts in the chroniclers to interpret their use. (Locke, 1923, 1928; Nordenskiöld, 1925 a and 1925 b; Altieri, 1941.) Although the specimens come from the Coast, whereas the descriptions in the chroniclers refer to the Highlands, and most of the specimens have been separated from their grave lots and are undatable, the specimens so obviously illustrate the descriptions that their use to supplement one another is probably justified.

Locke has shown quite conclusively that some of the quipus were used for recording numbers and their sums in a decimal system similar to our own. The group of knots farthest away from the main cord were units, the next group tens, the next hundreds, etc. (Locke, 1923). Nordenskiöld added that he had seen only one quipu with a knot in the 10,000 place, and stated that there was no sign for zero in the quipus (Nordenskiöld, 1925 b, pp. 7–8, 36). Zero, however, means simply that no number is to be read in the place where it occurs, but the place is to be counted. String No. 14 on Nordenskiöld's quipu No. 6 (pl. 3) and other examples show quite clearly that zero was indicated by the absence of a knot in the desired place, and as long as only one number was knotted on a string, and the number of places was known, no possible confusion could result. The quipu had to be accompanied by an oral comment anyway, so that if it were not clear from the way the knots were spaced on the various strings how many places were intended, this information could be included in the instructions. There is no doubt from Nordenskiöld's examples that the concept of an empty place in the number, which is what our zero stands for, was certainly understood by the makers of the Coast quipus.

The quipu is still generally used among Andean shepherds for counting. As several different ways of tying it are known, it would not be surprising to find ancient quipus which were tied differently. A quipu represented a series of numbers which could, perhaps, be read by any trained *Inca* accountant, but, in order that anyone but the original maker might understand what the numbers referred to, the quipu had to be explained.

The quipu is excellently adapted for recording numbers, but would be an exceedingly clumsy instrument with which to calculate. The chroniclers make it quite clear that calculation was done with piles of pebbles or grains, or by means of an abacus consisting of a tray with rows of compartments in which counters could be moved. The results of the calculation could then be recorded on the quipu (Wassén, 1940).

In addition to recording numbers, the quipu was used as a memory aid in reciting genealogies, liturgical material, and narrative verse, so that some chroniclers (e. g., Valera and Morúa) speak of *Inca* history as based on the quipus in such a way that they might appear to have been a form of writing, which they certainly were not.

The *Inca* had a special class of professional quipu interpreters (KHIPO-KAMAYOQ), whose duty it was to memorize the statistical, historical, and liturgical material accumulated by the government and to be prepared at all times to repeat it for the benefit of officials who desired to refer to it.[37]

At least in some districts, painted sticks were probably used as aids to the memory supplementary to or instead of the quipu (Pachacuti, 1879, pp. 237, 291).

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[37] The most important descriptions of *Inca* quipus in the chroniclers are the following: Cieza, 1880, bk. 2, ch. 12; Molina of Cuzco, 1913, pp. 125–126; Acosta, 1940, bk. 6, chs. 8, 14, 19; Garcilaso, 1723, pt. 1, bk. 6, chs. 7–9; Calancha, 1638, bk. 1, ch. 14; Cobo, 1890–95, bk. 12, ch. 37; Fray Antonio, 1920, pp. 6–7; Morúa, 1922–25, bk. 3, chs. 14, 25; Poma. 1936. pp. 335, 358, 360, 800.

Astronomy and the calendar.—The *Inca* looked upon the sun, moon, planets, and stars as important supernatural beings, and most of their star lore was consequently of a religious character. (See Religion.) However, the heavenly bodies were also observed in order to regulate the *Inca* calendar, an aspect of their study which is more properly classed as astronomical.

The *Inca* took the movements of both the sun and the moon into account in making their calendar, but it is not entirely clear how the two were reconciled. The difficulty is that the solar year is just under 365 days and a quarter, while 12 lunar months come only to about 354 days. Hence, a cycle of 12 lunar months falls behind the solar year at the rate of about one-third of a month a year.

The sun was observed to fix the seasons for planting and thereby start the agricultural year. The observations were taken by means of four small square masonry towers (PACA-ONANCAQ, "time markers") built in a row on the skyline east and west of Cuzco to mark the places where the sun rose and set at sowing time. The two center ones were close together, and the outside ones farther apart. Observations were taken from the middle of the Great Square of Cuzco, where there was a raised platform (OSNO) used as an imperial judgment seat. When the sun passed the outside tower, it was time to sow early crops (August), and, when it was framed by the two central towers, it was time for the general sowing (September).[38]

Cobo states that similar observations were taken to fix the beginning of the year at the December solstice, when the festival of the first month (QHAPAQ RAYMI) was celebrated, and, following Polo de Ondegardo, that there were towers to mark the beginning of every month (Cobo, 1890–95, bk. 12, ch. 37; Polo, 1916 a, chs. 7, 16). Garcilaso says that the towers were used to observe the solstices, while a sort of sundial, made by setting a pole in a circular space and noting its shadow, was used to mark the equinoxes (1723, pt. 1, bk. 2, ch. 22). These claims are doubtful for several reasons. First, Garcilaso is the first chronicler who says that the *Inca* observed the solstices, and the only one who claims that they observed the equinoxes. Cobo probably borrowed his story of the solstices from Garcilaso, so that both claims stand only on Garcilaso's authority, which is not great in matters of this kind. Second, if the *Inca* observed the solstices, or both solstices and equinoxes, these events should figure prominently in the ceremonial calendar, and they are not mentioned there. Polo's story that solar observations were taken at the beginning of every month implies that the *Inca* had a series of solar months independent of the lunations, but Polo himself says that the *Inca* had lunar months, and Cieza, Garcilaso, and the author of the Anonymous Discurso say the same (references as above).

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[38] Anonymous Discurso, 1906, pp. 150–52; Betanzos, 1880, chs. 15, 18; Cieza, 1880, bk. 2, ch. 26; Poma, 1936 p. 260 (modification used in the provinces); Sarmiento, 1906, ch. 30 (he evidently failed to understand the principle involved). It should not be difficult to locate the ruins of the "calendar towers" on the skyline of Cuzco, and to make observations as a check on the chroniclers.

It seems most likely, then, that the *Inca* fixed at least two sowing dates by solar observation, from which they could determine the approximate number of days in a year if they were sufficiently interested to keep count. However, they probably made no use of solstices and equinoxes in their calendar, whether or not they displayed enough theoretical interest to observe them. Their months were lunar, and they seem to have had no very exact way of adjusting them to the solar year. Probably the count was arbitrarily adjusted when the annual solar observations indicated that it was seriously wrong.

Anonymous Discurso gives some interesting data on the development of the *Inca* calendar which have a ring of probability and imply that the *Inca* were at least aware of the problem presented by the difference between the lunar and the solar year. It says that at first the Indians timed their planting by the flowering of a certain cactus, but that Inca Viracocha established a year of 12 lunar months, each to begin at the conjunction (new moon), named the months, and designated the work to be done in each. His successor, Pachacuti, soon found that the year was in utter confusion, and built the sun towers after consultation with his council of state so as to have some kind of a check on the lunar months. Special officials were appointed to take the observations (Anonymous Discurso, 1906, pp. 149–52).

The phases of the moon were carefully observed, and had some importance in ceremonial (González, 1608, pp. 174, 265, 306; Garcilaso, 1723, pt. 1, bk. 2, ch. 23), but no other subdivisions of the month were in general use. Poma and Montesinos speak of a week of 10 days. Possibly such a week was used in some parts of the Andean area, but there is no good evidence for it at Cuzco (Poma, 1936, pp. 235, 260; Montesinos, 1882, pp. 69, 74).[39]

The calendar in use in the *Chimu* Kingdom seems to have been based on entirely different principles from that of the *Inca*, for Calancha says that the *Chimu* counted a year from the time the Pleiades appeared until they appeared again. The Pleiades were believed to be the patrons of agriculture (Calancha, 1638, bk. 3, ch. 2; cf. Means, 1931, p. 62).

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[39] Archeological literature has used *intihuatana to designate certain outcrops of bed rock carved so as to leave an irregular vertical protuberance in the middle which is assumed to have been some sort of a sundial for calendrical observations. The most famous examples are those at Pisac (Squier, 1877, pp. 525–29; Montesinos, 1920, pl. 6 facing p.53) and Machu Picchu (Bingham, 1913, p. 509). The word does not occur in any chronicler nor in any of the older *Quechua* dictionaries, as far as I am aware. The first mention of it I have been able to locate is in Markham's "Cuzco and Lima" (1856, p. 181), where it is cited as the name of a group of ruins at Ollantaytambo. Squier records it both for Ollantaytambo and Pisac in such a way as to suggest that both the word and its implied meaning were current in the local *Quechua* of the Urubamba Valley at the time of his visit. He identified it with the pole sundial described by Garcilaso.

The word is good *Quechua*, and means "hitching-post of the sun." It was probably coined when the real use of the stone protuberances had been forgotten and is of a piece with QORI-WAYRACINA ("gold-winnowing place"), and IÑKA-WASI ("house of the Inca"), which have been applied to dozens of ruins in Southern Perú. As to the protuberances being sundials of some sort, all known examples are too short and too irregular to have been of the slightest use for solar observations. They were probably cult objects, and may have symbolized the place spirit of the hills on which they stand. The word *intihuatana should be discarded from archeological literature, except as a place name.

THE INCA ACHIEVEMENT

The 90-odd years of the *Inca* Empire formed the most significant period in all of Andean Indian history. In it, the whole of Andean culture was given a new orientation and turned into paths of development which it is still following after four centuries of alien domination. In a very real sense, modern Indian history begins, not with the Wars of Independence or with the Spanish Conquest, but with the organizing genius of Inca Pachacuti in the 15th century.

At the time of the *Inca* conquest, the Andean area was occupied by a very large number of tribal groups and small states differing from each other politically, linguistically, and culturally. They shared many elements of culture, such as common food plants and domestic animals, similar basic style of dress, huaca-worship, and certain religious attitudes, similar weapons and tactics, and simple techniques of weaving, metallurgy, and other handicrafts, but the differences between them were at least as numerous as the similarities, and were as notable in degree as in kind. There was a vast gulf between the simple culture of poverty stricken and disorganized groups, like the Indians of the Huancapampa region in northern Perú, and the rich and complex life of Coastal states, like the *Chimu* Kingdom. It was the *Inca* mission to level up such differences by efficient administration, exchange of populations, and the prestige value of *Inca* culture, and gradually to unify the life, language, and institutions of the whole vast *Inca* Empire. The task was half accomplished at the time of the Spanish Conquest, but the change of ruling class did not stop the program of unification. A comparison of modern Indian life with that of pre-*Inca* days shows many differences: Instead of dozens of independent languages, five-sixths of the Indians now speak *Quechua*, the language of the *Inca* administration, and the other sixth speak *Aymara*, which had enjoyed a privileged position before the Spanish Conquest. The ayllu has become a less rigid unit, and new social groups based on the village have grown up; religion is uniform. All these changes had their beginning in *Inca* policy, and were merely continued by the Spanish Colonial government. The continuity of policy, of course, was only to a very limited extent the result of a deliberate Spanish imitation of *Inca* practice; for the rest, similar administrative problems suggested similar solutions. Nevertheless, the *Inca* were the first to apply these solutions in the Andean area, and they applied them very successfully.

During the contact between Indian and Mestizo since the coming of the Spaniards, there has gradually developed a feeling of cultural and linguistic solidarity among the Indians which justifies the use of the term "*Inca* nation" to refer to the 6 million speakers of *Quechua* and *Aymara* in the modern republics of Ecuador, Perú, and Bolivia. The *Inca* are a "nation" in the sense of being a group which shares a feeling of solidarity and a belief in a common culture, and which regards its language as the symbol of its separate existence. No political organization of any kind is implied, for the *Inca* nation exists without any national movement, without parties, and without a separate voice in any government. The feeling of solidarity is certainly present among the modern Indians, and can be traced back at least into the 19th century. It is a direct result of the unifying policies of Pachacuti and Topa Inca, and its existence in the modern world is their justification, their glory, and their fitting monument.

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THE QUECHUA IN THE COLONIAL WORLD

By George Kubler

INTRODUCTION

The function of this paper is to provide an account of the transformation of the *Inca* community into the modern *Quechua* settlement. How to combine the treatments of cultural change and cultural structure has been the writer's main concern. The interpenetration of Indian and European patterns produced a Colonial culture within which *Quechua* behavior was both continuous and adaptive. To speak of *Quechua* "culture" is artificial and misleading; the student is faced with the phenomenon of Colonial Peruvian culture, and within it he may occasionally isolate a *Quechua* component, related at all points to the enveloping Colonial matrix.

In what is perhaps the only other study of this kind in English, relating to Colonial *Maya* ethnology in Guatemala, Oliver La Farge (1940, pp. 281–291) calls attention to one of its difficulties.

> There is a tendency, with whatever approach, to over-simplify the problem, as if all we had to do were to segregate Spanish and pre-Columbian elements, while noting what parts of each culture had been overthrown by the other. This tendency overlooks the fact that the peculiar history of this area has produced a situation of great complexity . . .

One might add that every area of Latin America has had a peculiar history, and that the situation grows most complex at the three or four great foci of Colonial and Republican life: México, Perú, New Granada, and Chile. The significant aspect of La Farge's method, moreover, is that writing as an ethnologist he has had to rely upon administrative and legislative material concerning Indian land tenure "taken together with major historical developments," in order to "show the rising and falling pressure of non-Indian culture upon the tribes," more than upon the internal evidence of Indian society itself. Such will of necessity be the approach followed here.

HISTORICAL SOURCES

Evidence for the internal structure of Colonial Indian society is most unevenly distributed. The flood of written material bearing expressly upon *Quechua* ethnology, written in the 16th and early 17th centuries, served the purposes of the administrative organization of the colony. (Acosta, 1940; Anonymous, 1889; Aponte, 1867; Betanzos, 1880; Cobo, 1890–95; Calancha, 1638; Falcón, 1867; Garcilaso, 1722; Herrera y Tordesillas, 1726–27; Levillier, 1919 a, 1921–26; Loaysa, 1889; López de Velasco, 1894; Matienzo, 1910; Monsalve, 1604; Morales, 1871; Oviedo, 1851–55; Perú, 1906; Polo de Ondegardo, 1916 a, 1916 b; Poma, 1936; Quiroga, 1922; Relaciones geográficas de Indias, 1881–97; Sánchez, 1867; Santillán, 1879; Toledo, 1867, 1899; Vázquez de Espinosa, 1942; Vega, 1896.) Thereafter, systematic studies of Indian life and history are widely spaced in time. To be noted apart is the class of documents pertaining to the extirpation of idolatry in the first half of the 17th century. (Arriaga, 1920; Augustinians, 1865; García y Sanz, 1876; Peña, 1698.) These bear mainly upon the religious life of the *Quechua* and contain little besides accounts of ritual behavior and personnel. Valuable as they are, such records give almost no information concerning community life. The remainder of the Colonial era is almost barren of writings dedicated to the Indians. These sections of our account have, therefore, been written entirely from administrative documents, and occasional travels, in which the allusions to Indian life are infrequent and casual. (Angelis, 1836–37; Anonymous, 1943; Arriaga, 1900; Borda, 1881; Bueno, 1763–78; Fisher, 1929; Haenke, 1901; Hoyo, 1917; Juan and Ulloa, 1826; Memorias, 1859; Lorente, 1867–72; Rio, 1812; Varinas, 1873.) The 19th century is likewise silent about the condition of the Indian population, with the exception of government papers and the unsystematic remarks frequently found in the literature of travel by foreign visitors (Kaerger, 1901). Finally, it is only lately that scientific community study has been attempted for Perú (Valdez, 1921; Sáenz, 1933).

HABITAT

The term *Quechua* is commonly used to describe the modern Indian inhabitants of the Andean area who speak the *Quechua* language in any of its numerous dialects. (Markham, 1871, p. 300; Garro, 1942, pp. 442–50; Rowe and Escobar, 1943, p. 21.) The great difficulty with this usage lies in the fact that the modern geographic distribution of the *Quechua* language is far more extensive than it was in the 16th century. In any case, the early colonists of the 16th century used the term to distinguish the speech of the *Colla* dwellers of the altiplano from that of the dwellers of the deep Highland basins or valleys of the type in which Cuzco lies. The designation for these deep Highland valleys in the "lengua general del Ynga" was "quechua."

The precise ecological meaning of the term "quechua" may be recovered from geographical descriptions written about 1586 (Relaciones geográficas de Indias, 1881–97, 2:24, 28, 31, 41, 201, etc.). The *Quechua* settlements of this period characteristically maintained a double economy based upon geographical proximity to two distinct economic zones which were defined by altitude. This is to say, the *Quechua* towns were settled by preference within easy access both to the Highland pastures and to the arable flood plains of the valleys and canyons. Such situations are those where the inhabitants occupy a grassy, level-topped shoulder, below the mountain woodlands, but high above the valley floor with its deep alluvial pockets. The altitude thus selected may vary between 3,000 and 13,000 feet above sea level. On such well-watered shoulders, or flat-surfaced spurs, the settlers may raise maize, vegetables, and barley (pl. 85). Far below, in the canyon or valley, sugarcane and fruits are grown. Above the settlement (13,000 to 17,000 feet (4,000 to 5,000 m.) above sea level), on the other hand, crops of potatoes and flocks of livestock may be maintained in the mountain pastures near the woodland zone (fig. 30) (Bowman, 1916, p. 57).

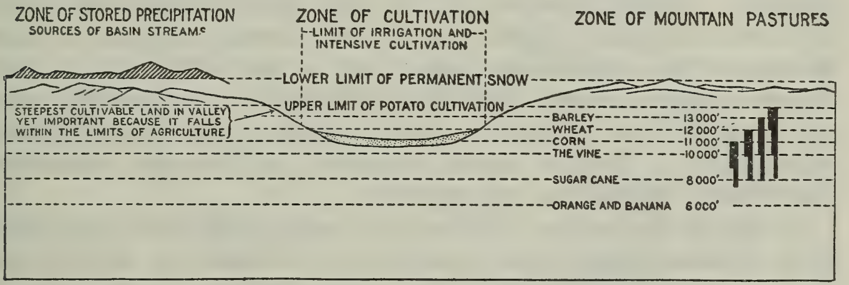
ZONE OF STORED PRECIPITATION
SOURCES OF BASIN STREAMS
ZONE OF CULTIVATION
LIMIT OF IRRIGATION AND INTENSIVE CULTIVATION
ZONE OF MOUNTAIN PASTURES
LOWER LIMIT OF PERMANENT SNOW
UPPER LIMIT OF POTATO CULTIVATION
STEEPEST CULTIVABLE LAND IN VALLEY YET IMPORTANT BECAUSE IT FALLS WITHIN THE LIMITS OF AGRICULTURE
BARLEY 13 000'
WHEAT 12 000'
CORN 11 000'
THE VINE 10 000'
SUGAR CANE 8 000'
ORANGE AND BANANA 6 0C0'

Figure 30.—Climatic cross section of a typical intermontane basin in the Peruvian Andes. The cultivation and pasture zones are shown, and the thickness of the dark symbols on the right is proportional to the amount of each staple that is produced at the corresponding elevation. (After Bowman, 1916, fig. 35.)

In the Colonial era, the Spaniards first preempted the key basin formations, such as the Valleys of Cuzco (11,000 feet (3,000 m.) above sea level), Jauja, Huamanga, Yucay, and Anta, where, depending upon altitude, the possible crops were maize, barley, wheat, and potatoes, or sugarcane, alfalfa, and fruit, as in Abancay Valley (6,000 to 8,000 feet (2,000 to 2,500 m.) above sea level). The most lucrative encomiendas were established in the deeply canyoned environments, that is, in the quechua proper, while the puna regions of the Collao were long left untouched by Europeans, until well after the middle of the 16th century (Levillier, 1921–26, 1:19, 127; Montesinos, 1906, 1:193).

Here, then, we shall use an empirical definition of the term "*Quechua.*" It refers specifically to certain Colonial Indian groups, to distinguish between pre-Conquest and post-Conquest versions of Peruvian culture. Those human agglomerations are regarded as *Quechua* which speak the *Quechua* language, or inhabit an environment of deep Highland valleys known as quechuas. *Quechua*-speaking peoples inhabiting the puna or the Coastal plains may, of course, be regarded as *Quechua*. *Quechua* also, however, may be certain non-*Quechua*-speaking Indians of the deep Highland valleys, from Northwest Argentina, North Chile, and eastern Bolivia to the Ecuadorean Highlands.[1]

POPULATION

The Viceroy of Perú was concerned mainly with the government of the two great Audiencias of Lima and Charcas (pls. 87, 88, 89). The Audiencia of Lima included most of what is known today as the Republic of Perú, and the Audiencia of Charcas included southern Perú and Bolivia. Here, therefore, any reference to Colonial Perú may be taken to concern only these areas which are today defined as Perú and Bolivia, and in which the *Quechua* are most thickly distributed. Modern Ecuador, on the other hand, corresponds to the Colonial Audiencia of Quito, and its dense *Quechua* populations were subject to that government rather than to the Viceroyalty of Perú. Many differences may be pointed out between the *Quechua* of Ecuador and those of Perú or Bolivia; the discussion of the Colonial Indian populations of Ecuador should, therefore, be conducted separately. (See Murra, this volume, pp. 785–821.)

As for the Audiencias of Lima and Charcas, their territorial definitions remained fairly stable throughout the Colonial era (fig. 31), and the populations may be studied by means of various counts taken at intervals during the 16th, 17th, and 18th centuries (table 1).

TABLE 1.—*Total Indian populations in the Audiencias of Lima and Charcas*

Date	Number of Indian persons	Number of Indian tributaries	Source
1561	1, 490, 137	315, 335	Zavala, 1935, pp. 323–26.
1572	------------	287, 395	Vázquez de Espinosa, 1942, pp. 703, 720.
1586	1, 230, 798	------------	Diez de la Calle, 1648, p. 18a.
1591	------------	275, 078	Morales, 1871, p. 333.
1628	------------	231, 008	Vázquez de Espinosa, 1942, pp. 703, 720.
1754	612, 780	143, 363	Manso, 1859, App. p. 7.
1781	610, 190	141, 248	Escobedo, *in* Haenke, 1901, p. 92.
1796	608, 894	------------	Memorias, 1859, vol. 6, App. pp. 6–9.

The accompanying graph (fig. 32) reveals a movement of population density characterized by unrelieved loss. At no moment during the Colonial era do the Indian populations appear to have undergone phases of recovery, such as those determined for the 16th century in México. It is also to be noted, however, that not until 1720 did any great losses through pestilence occur in Perú. According to Dr.

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[1] During the historic period, *Quechua* has spread widely also into the Montaña of eastern Perú and Ecuador and even somewhat into the Amazon Basin. These areas will be described in the Handbook, volume 3.—EDITOR.

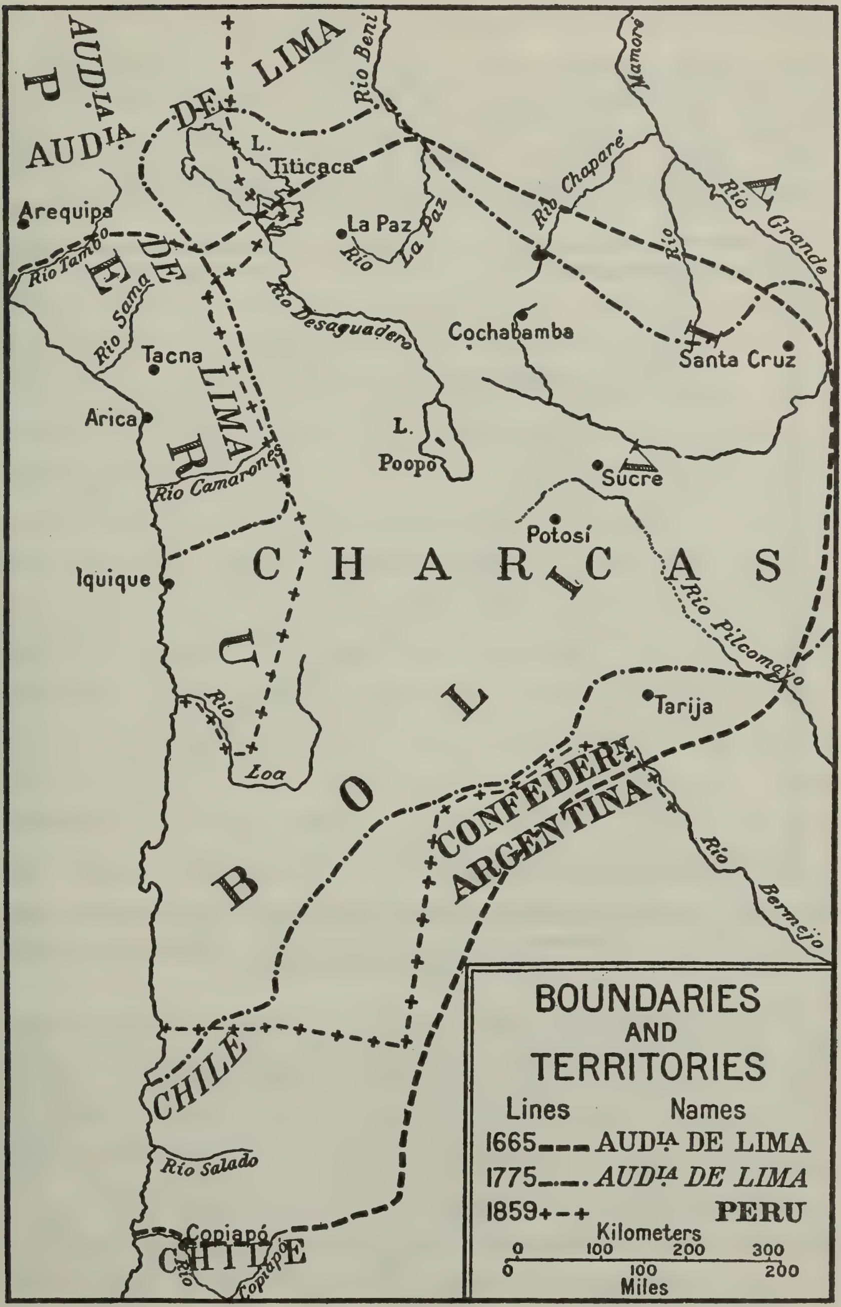

AUD^IA DE LIMA
AUD^IA DE LIMA
PERU
Río Beni
Mamoré
L. Titicaca
Arequipa
La Paz
Río La Paz
Río Tambo
Río Sama
Tacna
Arica
Río Desaguadero
Cochabamba
Río Chaparé
Río
Río Grande
Santa Cruz
L. Poopo
Río Camarones
Sucre
Potosí
Iquique
CHARCAS
BOLIVIA
Río Pilcomayo
Tarija
Río Loa
CONFEDER^N ARGENTINA
Río Bermejo
CHILE
Río Salado
Copiapó
Río Copiapó
CHILE
BOUNDARIES AND TERRITORIES
Lines
Names
1665 AUD^IA DE LIMA
1775 AUD^IA DE LIMA
1859 PERU
Kilometers
0 100 200 300
0 100 200
Miles

Figure 31.—Map showing boundary changes in the Central Andes, 1665–1859 (After Ogilvie, 1922, fig. 41.)

Cosme Bueno, the plague of 1720 reduced the Sierra Indians by two-thirds (1763–78, n.p.). Although such losses in México during the 16th century threatened the extermination of the Indian race, no events of this class are known for the early Colonial history of Perú. (Kubler, 1942 a, pp. 606–43; Varinas, 1899, pp. 208–16; J. T. Polo, 1913.) Hence, the great decline in the Indian population of Perú before 1720 must be assigned to other sources than disease alone.

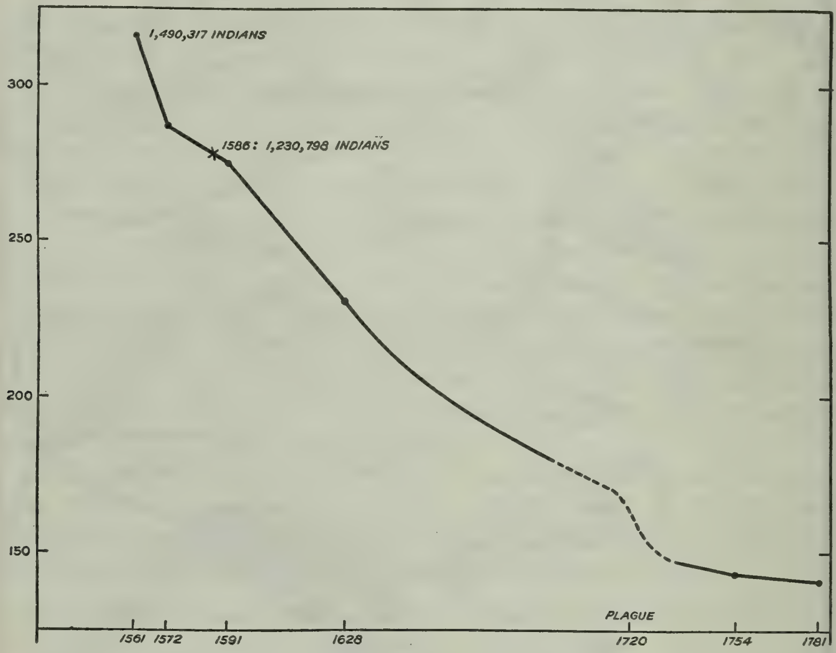


FIGURE 32.—Indian population decline in Colonial Perú. Census for the Audiencias of Lima and Charcas, between 1561 and 1781. Figures on vertical axis represent hundreds of thousands of Indian tributaries.

Varinas, for instance, attributes loss to the greed of those responsible for the administration of justice among the Indians (Varinas, 1899, p. 216), after noting that otherwise such losses were inexplicable when the great fertility of the Indians, the long absence of wars, and the superior moral climate of Christianity were taken into account. As a very general explanation, this may be allowed to stand. (See also Romero, 1923 d). Certainly no other historical factor may be invoked which will account for the startling rate of decay. The Civil Wars and the schismatic state of Indian society in the 16th century, the inhuman service of the mines in the 17th century, and the operations of debt servitude in the 18th century were all causes of a state of Indian disaffection which culminated in the great rebellions of the Late Colonial Period. But the charge of corrupt administration voiced by Varinas tells nothing of the efforts at reform, or of the ways in which the population declined.

A remarkable deceleration occurred in the rate of decline between the years 1572 and 1591. Both before and after this period the rate of loss appears to have been far more rapid. It is not unreasonable to associate this change of rate with the administrative reforms of the viceregal government of Francisco de Toledo. The systematic reducciones, the urban concentrations and regroupings, the administrative reorganization of the yanaconate, and the many other measures enforced by Toledo are surely reflected in this section of our curve. In other words, the achievement of the Toledan government may be interpreted as the regrouping of the Indians. The process of dispersal to inaccessible areas was not only halted, but reversed. That Toledo's measures, however, were merely remedial and palliative is demonstrated by the rapid acceleration in the rate of loss before 1628.

Precisely how may this rate of loss be described? In less than two centuries the Indian population was more than halved. It is a decline with which a greatly accelerated death rate apparently has little to do, as we have inferred from the relative absence of epidemics. Rather does it seem necessary to account for the great losses by movement of populations away from the Viceroyalty. In effect, such a hypothesis is supported by a comparison between the regional figures compiled in 1628 and again in 1754 (table 2). Of a total of 73 provinces, 62 are listed with figures in both counts (table 2). Of these 62 provinces in turn, all but 11 show loss between 1628 and 1754. These 11 provinces, however, gained by 1754. Three of them, the Cercado Province of Lima, and Cuzco and Cajamarca Provinces, were urban areas. The remaining eight, with exception of the Province of Piura, where Coastal agriculture was practiced, are all situated along the eastern Andean frontier, in the upper ranges of the Montaña zone. Paucartambo Province was a coca-growing district in the upper Montaña; Carabaya Province was noted for its resources in placer gold, and may also be designated as a Montaña province; in Porco Province important silver mines were situated; Tomina had the Montaña at its eastern border and was a great agricultural province growing the food for the laboring populations of the mines; Cochabamba had the same character, as a food-growing area for the service of the mining industry; the high plateaus and quechuas of Sicasica Province also provided food for the miners; and Larecajes Province edged well down into the Montaña.

The suggestion lies very close that these increases at the southeastern frontiers of the Audiencia are merely the official reflections, within administrative boundaries, of a far more extensive process of population displacement. Reports are frequently encountered, in connection with draft labor (mita) at the mines, which tell of the

TABLE 2.—*Movement by provinces between 1628 and 1754 in the Audiencias of Lima and Charcas*

Diocese	Province	Persons in 1628	Persons in 1754	Movement	Economic type of province	Amount of movement
Lima	El Cercado	1,921	2,078	Plus	Urban	157
Do	Cañete	3,984	2,361	Minus		
Do	Ica	4,222	3,162	do		
Do	Yauyos	15,241	6,835	do		
Do	Huarochiri	15,835	7,711	do		
Do	Canta	15,518	8,162	do		
Do	Chancay	8,685	5,134	do		
Do	Santa	3,167	395	do		
Do	Cajatambo	25,577	5,643	do		
Do	Huaylas	28,751	12,541	do		
Do	Conchucos	25,512	10,739	do		
Do	Huamalíes	12,432	3,140	do		
Do	Huánuco		4,427	do		
Do	Tarma	30,266	8,454	do		
Do	Jauja	32,021	21,062	do		
Trujillo	Trujillo		739			
Do	Piura	8,700	15,106	Plus	Coast farming	6,406
Do	Cajamarca	36,817	42,187	do	Urban mercantile	5,370
Do	Huamachuco					
Do	Cajamarquilla	6,453	3,986	Minus		
Do	Chachapoyas		3,750			
Do	Luya-Chillaos	9,433	2,014	do		
Do	Lamas					
Huamanga	Huamanga		1,062			
Do	Huanta	12,337	6,935	do		
Do	Angaraes	10,595	9,953	do		
Do	Castrovirreina	9,408	5,631	do		
Do	Lucanas	29,915	4,259	do		
Do	Parinacochas	22,298	4,729	do		
Do	Vilcashuaman	22,110	6,031	do		
Do	Andahuaylas	22,761	8,297	do		
Cuzco	Cuzco	5,626	9,015	Plus	Urban	3,389
Do	Abancay	17,070	12,277	Minus		
Do	Aymaraes	44,957	11,776	do		
Do	Cotabambas	29,552	7,423	do		
Do	Paruro	17,271	7,839	do		
Do	Chumbivilcas	23,160	8,145	do		
Do	Tinta	34,713	12,785	do		
Do	Quispicanche	21,779	17,560	do		
Do	Calca y Lares	14,074	3,906	do		
Do	Urubamba					
Do	Paucartambo	4,631	7,141	Plus	Coca, montaña	2,510
Do	Carabaya	2,849	6,540	do	Gold, montaña	3,691
Do	Lampa	35,429	9,072	Minus		
Do	Azángaro	25,314	11,543	do		
La Plata	La Plata	7,323	521	do		
Do	Yamparaes		4,125			
Do	Atacama		1,132			
Do	Lipes		2,080			
Do	Carangas	29,190	7,184	do		
Do	Paria	33,711	9,181	do		
Do	Porco	13,350	19,589	Plus	Silver mining	6,239
Do	Potosí		6,711			
Do	Chichas-Tarija		9,594			
Do	Cinti		5,078			
Do	Pomabamba					
Do	Tomina	2,265	4,493	do	Agriculture-montaña	2,228
Do	Chayanta	29,261	15,231	Minus		
Do	Oruro		4,426			
Do	Cochabamba	10,458	26,531	Plus	Food-growing, mines	16,073
La Paz	La Paz		3,261			
Do	Sicasica	16,184	28,967	do	Food for mines	12,783
Do	Pacajes	51,037	13,908	Minus		
Do	Omasuyos	34,352	20,111	do		
Do	Larecajes	9,266	11,195	Plus	Montaña frontier	1,929
Do	Paucarcolla	23,581	8,559	Minus		
Do	Chucuito	[1] 66,820	22,336	do		
Arequipa	Arequipa	7,365	1,669	do		
Do	Camaná	2,752	667	do		
Do	Moquegua	14,440	2,342	do		
Do	Collaguas	22,869	4,496	do		
Do	Condesuyos	18,277	4,800	do		
Do	Arica	7,107	509	do		
Totals		1,089,992	[2] 542,408			

[1] Vázquez de Espinosa (1942) gives only the number of tributaries for Chucuito Province. A conversion factor of 5 has been used to arrive at the number of persons. The number of tributaries actually given is 13,364.

[2] Excluding provinces for which no 1628 census is available.

eastward flight of the laborers to new settlements in the uncharted Montaña. It is not unlikely that a substantial part of the population of the western marches of the 18th century Viceroyalty of Buenos Aires consisted of such fugitives from Perú. In any case, in Chucuito Province, whence one of the great mitas was levied for the mines of Potosí, the Indian population shrank by two-thirds between 1628 and 1754.

Finally, the Indian rebellion of 1780, associated with the personality of Tupac Amaru, broke out among these provinces of the Audiencia of Charcas where great population increases are defined. Sicasica, Larecajes, and Cochabamba were among the focal centers of the rebellion. (See pp. 350–353 below.)

Unrecorded movement.—The main events which may be associated with great Indian population losses are connected with the rebellion of Manco Inca in 1536–37. High mortality was one component of these losses, but the factor of massive dispersals away from the area held by by the Spaniards must also be reckoned with. Throughout *Inca* Perú, a state of flux prevailed until after 1550. To what extent the disruption of the *Inca* economy produced food crises can only be guessed from the occasional references to famines. Great epidemic incursions, as indicated before, are not recorded, and probably did not take place. Yet two possibilities may be ruled out: Peruvian population neither remained static between 1531 and 1561 nor did it increase, for neither stability nor increase is a phenomenon characteristic of the cultural shock of conquest.

It may be assumed, therefore, that population density decreased after 1531, and that it continued a decline which probably characterized the period of warfare between Huascar and Atahuallpa before 1531. How great was this decline? If in 30 years the pre-Conquest population was halved, no violent change of direction needs to be imposed upon the portion of the curve projected backward from 1561. If, however, it is assumed that the total population was reduced by two-thirds or three-fourths, as indicated in figure 33, then disruptive factors of far greater magnitude than those suggested by the historical record must be invented and introduced. The writer inclines to the hypothesis that population was no more than halved in 1531–61. It will be noted that if this is the case, *Inca* Perú, excluding the provinces of Quito, can have had a total population no greater than 3,000,000. If, however, it be assumed the population was reduced by three-fourths before 1561, the total population at the moment of the Conquest cannot have exceeded 6,000,000. The traditional estimates of 10,000,000 or 12,000,000 thus become impossible, even when the *Inca* populations of Quito are included. To fill out such estimates, Quito would have to be assigned between 4,000,000 and 6,000,000 inhabitants in 1531. (See also Rowe, this volume, pp. 184–185.)

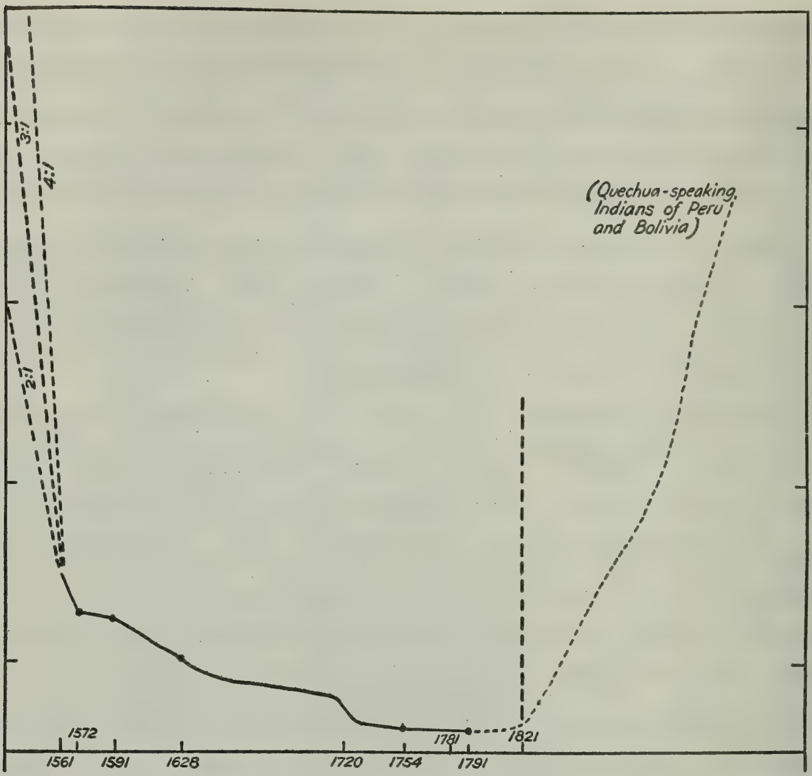


Figure 33.—Post-Conquest Indian population curve for Perú. Dotted portions of curve prior to 1561 are based respectively on a postulated post-Conquest decline that reduced the native number by a half, a third, and a fourth. Figures on vertical axis represent millions of Indians of all ages and both sexes in the Audiencias of Lima and Charcas.

PERIODS OF ACCULTURATION

The turning points at which one whole constellation appears to yield its dominance to the succeeding constellation have been situated, for the present purposes, around 1572, 1650, 1750, 1821, and 1882. The year 1572 merely marks the time after which the formal codification of Colonial policy took effect in Perú, displacing the period of the Civil Wars and tentative colonization. The year 1650 was chosen because within the decade which it bisects may be situated the critical moments when Christianity displaced *Quechua* religion. A century later Indian restlessness was gathering momentum; the mid-18th century marks a critical moment in the spread of the great Indian rebellions, which were an indigenous byplay and prologue to the Creole Wars of Independence. The years 1821 and 1882, finally, were formal turning points in Republican history, marking respectively the achievement of Independence and the conclusion of the War of the Pacific.

CONQUEST QUECHUA (1532–72)

From the point of view of finding the germinal institutions and customs of Colonial culture, this epoch which is common to all Colonial histories, occupies a central and determining position. In it occur the innumerable ad hoc solutions to the strains and stresses of culture-conflict; these improvised solutions and spontaneous accords yield the empirical foundations for subsequent legislation and codification, whether with regard to the permanence or the change of institutions.

In *Quechua* life, the Conquest split between separatist and pacified *Quechua* is a dominating historical fact. The shifting party lines and allegiances present difficult problems of reconstruction, but their sense is clear; one great *Quechua* faction, in Vilcabamba Province, stood for the continuation of *Inca* culture, and the other stood, however, passively, for the acceptance of Hispanization. Neither of them is properly Colonial. Innumerable pacified *Quechua* retained much of their pre-Conquest daily culture in good functioning order. Only gradually was this day-to-day culture disintegrated by massive European influences. The separatist *Quechua,* on the other hand, elevated their resistance to an organizing factor which substantially altered the sense of *Inca* culture. Thus, we have the apparent paradox that the pacified *Quechua,* favored by inter-European conflict, maintained an integral *Inca* culture in remote environments rather longer than the resisting *Inca* faction, among whom the struggle for survival produced deep internal changes and movements of strategic acculturation. These differences need to be designated in the terminology. Thus, the full but ebbing tide of *Inca* culture among the pacified *Quechua* cannot properly be termed Colonial, however inexorably their Colonial status was imminent. A convenient name for this situation, as proto-Colonial, has, therefore, been adopted. On the other hand, the separatist *Quechua,* with their rapidly changing customs, can no longer be designated as bearers of *Inca* culture; the term Neo-*Inca* will perhaps indicate their situation.

Proto-Colonial Quechua.—It may be postulated that the rate and degree of Hispanization among the pacified *Quechua* was conditioned (*a*) by their proximity to Spanish centers, and (*b*) by their caste or status in Indian society. In the dispersed and inaccessible settlements, where encomiendas were slow in being awarded, we may look for the most complete retention of day-to-day *Inca* culture. Nearer the cities, however, the changes wrought by encomienda, with its attendant pressures, produced closer approximations to the Colonial *Quechua* community. Within the settlements susceptible to colonization, however, the curacas were entrusted by the Spaniards with the important duties of collecting tribute, enforcing the mita, and supervising the cultivation of lands. Also, their offices were strictly hereditary, and if heirs were lacking, the succession was regulated by Spanish rules of inheritance. (Memorias, 1859, 1:19–20; 4:93; Peña, 1698, p. 316.) Thus the curacas most rapidly assimilated certain aspects of Spanish social and material culture. At the other end of the social scale, the innumerable Indians who became alienated from their communities, for whatever reason, entered the yanaconate, where the performance of domestic services for Spaniards rapidly converted them into an urban and Hispanicized proletariat. In the *Quechua* communities, the remaining tribute-payers (hatunrunas) continued to retain substantial areas of a day-to-day *Inca* culture, only gradually permeated by Colonial intrusions.

The most powerful instrument used by the Spaniards in the colonization of the Conquest *Quechua* was the institution of encomienda. When a community, or group of communities, fell within an encomienda grant, the Indians' control of their lands was gravely endangered. If the community were unable to meet its tribute obligations, or if its curacas could be suborned, the community lands might, without restraint, be offered for sale. The widespread institution of encomienda throughout Perú, therefore, signified the progressive dissolution of the *Quechua* communities, or their enforced dispersal to more remote and less attractive lands. The immense swelling of the yanaconate may be directly assigned to the effects of encomienda. Thus encomienda may legitimately be compared to the latifundismo of the 19th century (cf. Poblete, 1938, p. 32); any incorporation of the communal lands by an individual owner signifies in Perú some progress in the dissolution of indigenous society. In the 16th century, encomienda facilitated the introduction of European food-crops and animals. Unrestricted stock raising and highly diversified food growing were possible only after the massive disruption of Indian land tenure had been effected.

The second powerful instrument in the enforced acculturation of the residual *Quechua* communities was the exaction of tribute. The assessments in kind usually forced a community to adopt the agropecuarian activities of Europe. A wide gap soon developed within *Quechua* subsistence activities. The sources agree that few European foods found a secure place in *Quechua* diet. The traditional basis of nutrition continued relatively undisturbed, and a wholly different set of foods was produced for tribute. The same situation prevailed with other basic commodities; production for Indian use was little affected by the concurrent production for European use. One of its results was the emergence of what may be designated as a double social personality. On the one hand, *Quechua* communal production continued and, on the other hand, a set of mercantile practices associated with European goods grew up beside the Indian economy.

Extreme mobility characterizes proto-Colonial *Quechua* life, a mobility which is not only physical but social. In the 16th century, the landless, rootless yanaconate was constantly on the move; the communities themselves underwent dispersal or enforced concentration; the great Indian armies, whether in Spanish factional or in Neo-*Inca* service, were in unceasing advance or retreat. In the social order, *Inca* society underwent a process of leveling in which the extremes were displaced. The range of possible social movement was constantly narrowing, but all the classes of *Inca* society were implicated in the movement. The yanaconate and the *Inca* caste gravitated toward Spanish society. Within the Indian community, distinctions of caste were leveled by the common imposition of tribute. The end product in the Early Colonial Period, after 1572, was a *Quechua* society of relatively uniform and undifferentiated character, largely divested of its faculties for effective self-government.

The pressure of Spanish colonization upon *Quechua* society in the proto-Colonial Period was chiefly economic and political. The student is repeatedly brought to wonder at the ineffectiveness or absence of religious and moral colonization. *Quechua* religion survived virtually intact within the communities and even in Spanish settlements, but for certain processes of antagonistic fusion. The situation is precisely the inverse of that which prevailed in México before 1572, where the initial colonization was conducted chiefly by the regular clergy, according to the philosophical dictates of a humanist evangelism.

The Neo-Inca State.—The 40-year resistance by the Neo-*Inca* (to 1572) was organized in the effort to escape and counter the leveling process in early colonization. The retention of the Incaship and the incorporation of many non-*Quechua* speaking peoples as military allies bespeak the vital persistence of the *Inca* concept of the state. In what measure its highly articulated administrative system actually survived is difficult to determine. The physical mobility which characterizes other sections of Conquest *Quechua* life was indispensable to the survival of the Neo-*Inca;* their entire history may conveniently be described as a magnified and special instance of mass dispersal. Unceasing military contingencies inhibited the exercise of customary administrative faculties. All the resources of Neo-*Inca* society were drawn into the struggle for survival. Hence leveling was inevitable; the fighters at the siege of Cuzco, for instance, were simultaneously food growers, and in Ollantaytambo or Viticos (fig. 34) the traces of an administrative hierarchy are faint. The *Inca* ruler maintained a "court" consisting of military aides whose needs were less those of an elaborate ceremonial of caste than of soldiers in bivouac.

The economic life of the Neo-*Inca* was characterized by a split analogous to that which prevailed in pacified *Quechua* society. The traditional subsistence activities continued, but the group depended heavily upon a commercial and piratical relationship to European culture. The great need for European weapons and horses was satisfied by raiding activities. Other commodities were acquired by a clandestine commerce in tobacco, coca, and precious metals. Its volume is difficult to estimate, but there can be no question that Neo-*Inca* resistance relied upon copious supplies of goods acquired from Europeans and the pacified *Quechua*. Hence, acculturation was materially advanced by the very fact of resistance.

The religious life of the Neo-*Inca* community underwent certain deformations which were not suffered by the pacified *Quechua*. There is evidence that many earlier political accretions to *Inca* religion were sloughed away during the residence in Vilcabamba. It is not un-

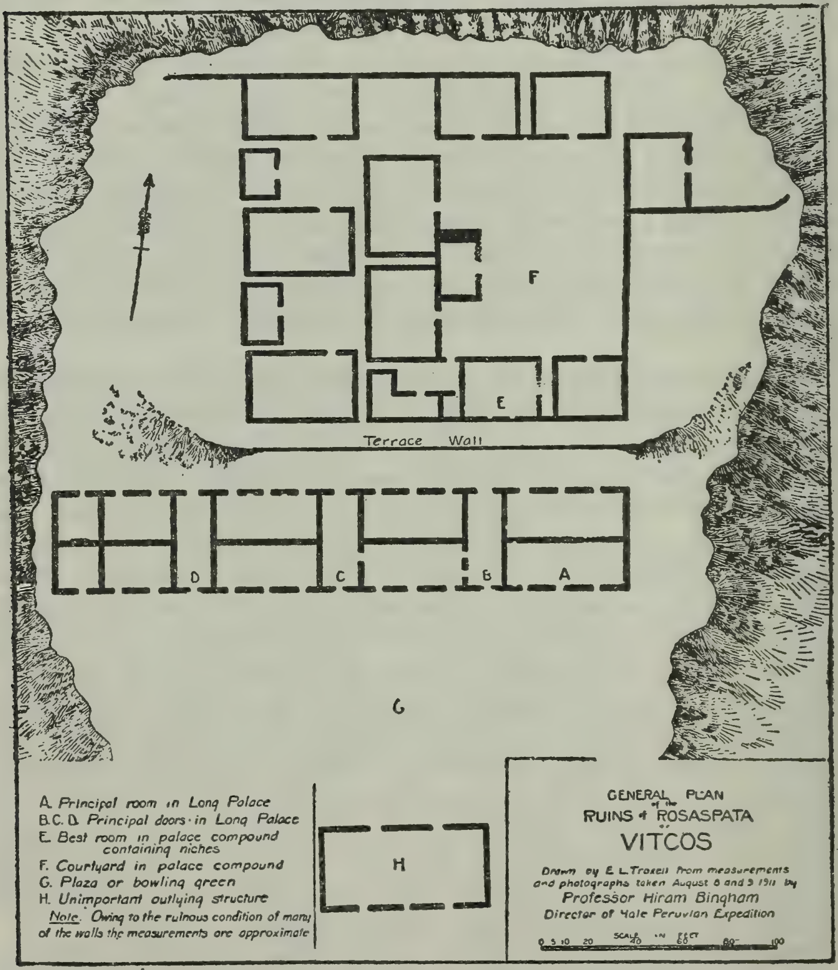

F
E
Terrace Wall
D
C
B
A
G
H
A. Principal room in Long Palace
B.C.D. Principal doors in Long Palace
E. Best room in palace compound containing niches
F. Courtyard in palace compound
G. Plaza or bowling green
H. Unimportant outlying structure
Note. Owing to the ruinous condition of many of the walls the measurements are approximate
GENERAL PLAN of the RUINS of ROSASPATA or VITCOS
Drawn by E. L. Troxell from measurements and photographs taken August 8 and 9 1911 by
Professor Hiram Bingham
Director of Yale Peruvian Expedition
0 5 10 20 40 60 80 100
SCALE IN FEET

FIGURE 34.—A plan of the ruins of Rosaspatas, or Viticos. (After Bingham, 1912, p. 49.)

likely that certain rearrangements of indigenous religious beliefs occurred, which were designed to equip the spiritual resistance of the participants. Finally, the fact of resistance attracted the attention of Christian ministers more than the passive acceptance displayed by the pacified *Quechua.* Costly efforts were made to send missionaries into Vilcabamba, efforts which were not lavished upon less militant regions. That the Neo-*Inca* tolerated and utilized such missionary intrusions is amply recorded; it probably signifies that resistance was directed less against the religious content of colonization than against its economic and political implications. Neo-*Inca* receptivity toward Christianity further demonstrates the inherently economic and political character of Conquest colonization in Perú.

However strained and deformed *Inca* culture may appear during its recrudescence in Vilcabamba, and however rapid and contagious the involuntary acculturation suffered by its Neo-*Inca* members, one factor must not be overlooked. Had separatism proved more successful, or had its direction fallen into more able hands, *Inca* culture might once again have unfolded its approximate configuration. It is not unreasonable to suppose that its apparatus entered a latent state in Vilcabamba, awaiting the moment of release from pressure to be reactivated. And yet, these latent institutions were surely affected by the historical facts of separatism and progressive acculturation.

Thus, the general pattern of the life of the Conquest *Quechua,* whether proto-Colonial or Neo-*Inca,* displays certain uniform traits. A truncated indigenous culture survived with great vigor within Spanish political and economic pressures. Its leveling and degradation were hastened by greatly increased physical and social mobility. Acculturation proceeded most rapidly among the floating populations released from previous cultural restrictions. The disruption of the social order and economic life left the structure of *Quechua* religion relatively intact, whose foundations, of course, rested in the *Quechua* community.

EARLY COLONIAL QUECHUA (1572–CA.1650)

Very sharp distinctions may be drawn between the events of this period and those which immediately precede and follow it. The chronological hinge is given by the administration of Viceroy Toledo and the suppression of Neo-*Inca* resistance early in the decade of the 1570's. The great administrative changes that mark the period are connected by intimate functional relationships.

In the first place, the reconcentration of dispersed populations was undertaken on a Pan-Peruvian scale. The systematic campaign of urbanization which this involved led to the creation of centers of population adjusted to the emerging Colonial economy. The total number of settlements was greatly reduced by increasing their individual size. Often the urban form reflected the most advanced tendencies in contemporary European thought about town planning; in its details, the new urban plan depended heavily upon Mexican Colonial precedent. Within the new communities, old Indian governmental arrangements were preserved with reduced powers, to insure stability of settlement, but the total economy which they were designed to serve was undergoing rapid and fundamental change.

The striking process in the Early Colonial Period is the nearly complete conversion of its marginal economy from agropecuarian activities to the exploitation of the great and newly discovered mines (pl. 90). This conversion was largely facilitated by the antecedent European absorption of Indian lands. As the Indians lost control of their fields, so did their labor become available for enterprises other than agriculture. The instrument devised to recruit and regulate mining labor was the mita, or draft labor. This institution, of course, had old pre-Conquest precedents, and it served during the Conquest Period for the recruiting of labor on public and private works. In the Early Colonial Period, however, it was administratively reorganized with a view to the special service of the mines.

The service of the mines not only endangered the production of food, but it could not be integrated with the institution of encomienda. The nature of encomienda is such that it approximates private ownership of Indian labor, and the alienation of encomienda Indians for purposes which did not benefit the grantee or encomendero was bitterly resented by that class of colonists. In Perú, accordingly, the number of outstanding encomiendas was very rapidly reduced at the end of the 16th century. The grants were incorporated as Crown properties, administered by Crown officials, and the Indians' lands were removed from the market. Thus the Crown acquired vast reserves of Indian labor, and the inception of a feudal order based upon encomienda was arrested. The corregimientos, as the various Crown properties were designated, soon became the typical Peruvian institution of local Colonial government.

From the point of view of the Indians, corregimiento drew them into the inhuman service of the mita at the mines, but it also guaranteed their land tenure in a manner which was impossible under encomienda. No Crown lands might be alienated: the Crown lands were occupied and worked by the resident communities, with the result that the Indians returned to the old concept of property as a function of labor. Their labor upon Crown lands assured them the undisturbed and perpetual usufruct of those lands. Hence, the creation of corregimientos and the decay of encomienda signified the reaffirmation of the *Quechua* community, which had been so gravely endangered in the Conquest Period.

It should not be thought that urbanization and corregimiento completely arrested the epidemic of vagrancy that had overtaken the Indian populations. The mita was onerous. The drafted Indians often found it convenient to migrate eastward away from the areas in which the draft was effective. And the Indians in the communities, faced with growing food for a large absent population and with raising tribute for the mita workers, yielded to the same temptation.

Corregimiento had the further consequence that Indian self-government was even further invaded by European office holders than under encomienda. Whereas the *Quechua* had been able during the Conquest Period to retain many aspects of the social and political organization of the community, these capacities were taken over and displaced in the Early Colonial Period by Crown officials. The corregidor soon appeared as a tyrant exploiting the Indians even more systematically than the encomenderos had done (Poma, 1936, passim).

To these powerful economic and political pressures, the colonists of the Early Colonial Period superimposed the great campaign against idolatry, which occupies the full span of this epoch. The number of curates working among Indian populations was greatly increased. Their object was to destroy *Quechua* religion by isolating its practitioners and by annihilating its cult objects. Systematic indoctrination accompanied the campaign. Its destructive measures probably impeded the stabilization of Indian populations in permanent settlement, and contributed along with the mita to general vagrancy. On the whole, the religious life of the *Quechua* at this time was one of unprecedented conflict and disturbance, matching the disorder introduced into their economic and social lives. The full work of colonization was in progress; the period has close analogies with the initial epoch of colonization in México before 1572.

MATURE COLONIAL QUECHUA (CA. 1650–CA. 1750)

By 1650 the scene was set in Perú for a long period of relative stability, when the fine adjustments could be made in the Colonial mechanism. All its essential components were in existence. The Peruvian enterprise was profit-bearing because of the mines. Some stability in their exploitation was assured by the consolidation of *Quechua* community life and by the regulation of draft labor. The insertion of civil and religious officers at all points of substantial Indian settlement had been accomplished. From the Indians' point of view, however, many great changes remained to be effected. Within each community the necessity of meeting the combined loads of mita, tribute, curates' salaries, tithes, and subsistence needs required local solutions that reached deep into individual lives. The spread of European fauna and flora obligated the *Quechua* either to alter or to defend the inherited cultural pattern based upon purely Indian agriculture. Government by Europeans now penetrated every community, and the Indian hierarchy of prestige needed to be rebuilt in terms other than those of political or economic capacities. As these adaptations were achieved, so did *Quechua* life approach the patterns of activity observable today.

To meet all their added obligations, many communities initiated the practice of local crafts and industries. Such activities naturally increased Indian production. The device of the reparto de efectos was accordingly instituted by the corregidores to absorb the Indians' purchasing power. In the hands of unscrupulous or indifferent men, the reparto rapidly became a form of debt-servitude. The modest Indian appetite for European luxury goods worked to his disadvantage. As his earning capacity increased, so was his consumption artificially augmented, and the improvement of his economic condition was illusory, for he was offered few choices of goods at arbitrary prices. It is very likely, however, that during this mature epoch of the Colonial economy, Indian material culture absorbed more European manufactures than at any other time in the history of the colony.

Another consequence of the simple industrial activity of the communities was their increasing participation in mercantile life. The transport and marketing of their manufactures became more and more prominent. Well-traveled trade routes and famous market places grew up; the Indian participated expertly in the operations of a rudimentary money economy (Sáenz, 1933, pp. 153-54), and thereby assimilated the culture of his exploiters. And yet, given the present-day character of *Quechua* life, one may suspect that these appearances of of an approximation to European culture were without deep or lasting effects in the community pattern. As in the Conquest Period, two social personalities were involved without deep interpenetration: one tenaciously retentive of a basic Andean subsistence economy, and the other oriented toward European activities.

The effects of the introduction of European flora and fauna may best be grasped in the extreme case of the fugitive *Quechua* who settled in the eastern yungas to escape the Colonial system in general and the mita in particular. Their life in such low altitudes could not have been secured without the knowledge of European livestock and cereals, for these regions had always been inhospitable to llama-raising and the agriculture of the temperate Highlands. The migration, however, invalidated the typical *Quechua* subsistence economy and compromised the familiar patterns of Highland community life. These very valleys attracted White and White-associated settlers in large numbers, by whom the *Quechua* were driven away and superseded (McBride, 1921, p. 12). Hence the situations in which the *Quechua* could attempt the complete assimilation of the new flora and fauna resulted in their ethnic disappearance from the region. On the other hand, the complete refusal by the *Quechua* to adapt to European livestock and crops resulted in the alienation of their lands, since without increased income they were unable to meet their tribute obligations. Without lands, the communities could not exist. Local adaptations in varying measures, therefore, characterize the Mature Colonial *Quechua* community; its normal survival was conditional upon the development of an agriculture, industries, and a mercantile life superimposed upon the fundamental communal agriculture and llama raising.

The Catholicization of the *Quechua* provided the communities with a complex ritual life which not only absorbed one-fourth of the year in formal festivals but also affected the tone of everyday life through the lay associations and the innumerable duties required of the parishioners. If the individual Indian could not participate in in civil or ecclesiastical government at any but the most humble levels, he could accumulate prestige by assuming responsibility and expenses in the ritual life of the parish. The lay associations (cofradías), with their different costumes, insignia, or vocations, gave a much needed ceremonial articulation to Indian society.

It may be said that Mature Colonial religious life retained a dense and intricate web of magical practices and superstitious beliefs, all rooted in pre-Conquest religion, but no longer organized by concepts of divinity. Idolatry, in the dogmatic Christian sense, effectively disappeared from *Quechua* Perú about the middle of the 17th century, both through the decay of native notions of divinity and through a more tolerant and discriminating interpretation by churchmen.

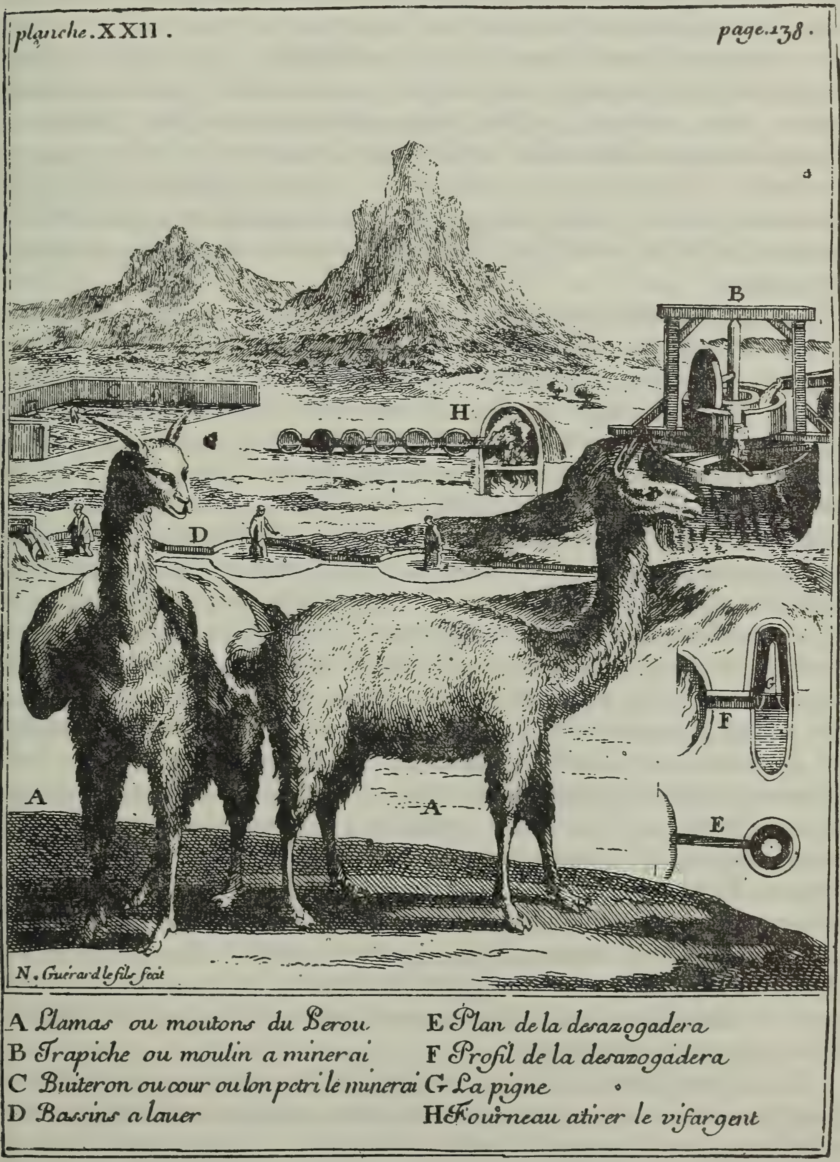
Thus, the life of the *Quechua* in the Mature Colonial Period was far from empty or monotonous. The annual program contained many rhythms associated with a diversified agriculture, stock raising, and home or communal industries. The mercantile activities called for seasonal travel. The elaborate celebration of Church feasts demanded the energies of different sections of the community in rotation. While some prepared the feast, others enjoyed it, until their turn to assume responsibility came up. Finally, the chance of being called to the mita marked one of the longer rhythms in the individual life cycle. The service brought hardship and separation, but it was demanded only at intervals of several years, and many devices for evasion were available.

In general, the Mature Colonial Period was marked by a social equilibrium which is not infrequently attained between colonists and natives in remote environments. Under peonage a remarkable illusion of human liberty may prevail. With their limited experience of alternative states of being, the subjects appear content with their lot, exploring and developing its restricted possibilities. But in Perú the unfavorable ratio of labor to its rewards was gradually worsened during the 18th century, finding expression first in official reports (Juan and Ulloa, 1826; Hoyo, 1917), and later in the fulminating rebellions of the last quarter of the 18th century.

LATE COLONIAL QUECHUA (CA. 1750–1821)

The social causes for the Indian rebellions are obvious. The explanation of their leadership is more difficult. It is partly to be sought in the growth of the independent authority of the curacas. Juan and Ulloa (1826, p. 288) pointed out that the curacas, with their hereditary status and authoritarian privileges, were enabled to accumulate personal fortunes. José Gabriel Tupac Amaru was by Indian standards a very wealthy man, able to afford rich costumes, a retinue of servants, and the many appurtenances of dignified conduct. The organization of the rebellions depended upon winning the allegiance of other such curacas, and elaborate maneuvers were undertaken to coalesce the forces thus assembled, On the other hand, the political emergence of the curacas in the Late Colonial Period may also depend upon the cult of *Inca* antiquity which had long existed in Colonial society (Romero, 1923 a), but suddenly, circa 1750, assumed more active expressions than simple pageantry and historical nostalgia. *Inca* pageants had always been held in Lima. One is recorded in 1756; the members of the *Inca* imperial dynasty were impersonated in full costume and with ceremonial escorts, and it is not surprising to find that three of these *Inca* impersonators were among the chief figures in the Revolt of Huarochiri (Memorias, 1859, 4:98). In Cuzco, the wearing of *Inca* costume was common in the 18th century, and many sets of portraits of the dynasty were preserved among Indian families claiming descent from the ayllus of Manco Capac, Sinchi Roca, Huayna Capac, etc. (Croix, 1790, *in* Memorias, 1859, 5: 172; Angelis, 1836–37, pp. 44–52). It is certain, furthermore, that the intellectual climate of Late Colonial Perú was hospitable to the ideas of the Enlightenment; if the works of the "philosophes" were not actually read among the Indians, their content was widely discussed and refracted by European circles (Hussey, 1942, pp. 33–34). The union of an affluent Indian caste, suffering nostalgia for lost *Inca* grandeur, with the political humanitarianism of 18th-century European thought, may be taken to afford at least a working hypothesis for the problem of leadership.

The social and economic life of the Indians underwent deep changes after the episode of the rebellions. The mining enterprises of Upper Perú, now two centuries old, were gradually abandoned, falling into a desuetude from which they were revived only in the 19th century by English capital (Willcox, 1921, pp. 644–645). It is inaccurate to assign the decay of the mining economy directly to Indian rebellions; the yield from the mines had long been dwindling (Hussey, 1936), and with the Colonial technology no effective recuperation could be achieved (fig. 35). The rebellions hastened the disintegration of the labor service, and thus created a situation favorable to the later episodes of the Creole Wars of Independence. In the administrative sphere, the extensive reforms of the Código de Intendencias were in-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B
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N. Guérard le fils fecit
A Llamas ou moutons du Perou
B Trapiche ou moulin a minerai
C Buiteron ou cour ou lon petri le minerai
D Bassins a lauer
E Plan de la desazogadera
F Profil de la desazogadera
G La pigne
H Fourneau atirer le vifargent

Figure 35.—Highland mining technology of Perú-Bolivia, early 18th century. (After Frézier, 1716, opp. p. 138.)

troduced to Perú in 1784 (Croix, 1790, *in* Memorias, 1859, 5:70; Fisher, 1929). The new Code forbade the notorious reparto de efectos, against which the rebellions were directed, but the custom continued unabated, according to Viceroy O'Higgins, until after 1800 (Juan and Ulloa, 1826, ed. note, p. 664). The Intendencies, however, had been under consideration in Spain since the decade of the 1740's; they were devised in answer to the same abuses which occasioned the rebellions in Perú, Colombia, and Venezuela (Arciniegas, 1939), but they were not directly caused by the rebellions. It is significant that no specifically Peruvian code was ever devised; the Peruvian Intendencies were governed by the Codes established for New Spain and Buenos Aires. The Indian uprisings are rather to be interpreted as moments of protest among populations possessing extremely reduced powers of action. That the protest was registered in administrative practice is undeniable, but it did not initiate social and economic legislation.

During the rebellion, remarkable loyalty was manifested by the rebels as regarded Church and Crown. The leaders' object was to capture and preempt Spanish institutions, rather than to destroy them. Their loyalty to the Church was even firmer than their loyalty to the Crown. Formal declarations of adherence to the Crown were common enough, but it was among the curates that the rebels found their closest sympathizers in European circles. Recently published evidence would indicate that the Bishop of Cuzco in 1780 not only encouraged the rebellion of Tupac Amaru, but was ready to yield the city to the Indians at the time of the siege. The editor of this remarkable document (Anonymous, 1943) has promised to publish further documents exculpating Bishop Moscoso. Until then, his case cannot fairly be judged. The important fact, however, is that his contemporaries could find it possible, whether rightly or wrongly, to accuse him of such complicity. In general, the rebellion was directed against corregidores, who were Crown officials, and not against curates. The rebels went to great lengths to secure and attach priests, who were accorded the usual reverent treatment, and Tupac Amaru himself insisted repeatedly that he never willfully damaged any Church property excepting under duress. The Indians, in effect, had no outstanding complaint against the Church. Its ministers often interceded for them; its rituals had become an integral part of their lives; its faith governed their actions and thoughts as their capacities permitted.

If the Late Colonial Period was marked by a resurgence of positive historical action among the *Quechua*, that activity, manifested in the rebellions, was spasmodic and transitory. During the Wars of Independence, the Highland Indians of Perú took little part in the

Creole conflict. Their passive loyalty to the Crown actually impeded the achievement of independence.

REPUBLICAN QUECHUA

All that can be achieved here is to indicate the presence of numerous problems, which are insoluble without detailed statistical treatment. An extraordinary increase in the Indian populations marks the 19th century. It is not unlikely that the present *Quechua*-speaking population of Perú and Bolivia far exceeds that of the same area under *Inca* domination. The sources of this great increase may be related in part to the cessation of Colonial mining enterprises, and to the reversion of the Indian populations to an agropecuarian economy (Mariátegui, 1928, p. 15).

Early Republican legislation attempted to dissolve the communal regimen of property by assigning Indian lands to individual Indian owners. The policy had disastrous effects, and such lands were, therefore, swiftly withdrawn from the market (Sáenz, 1933, pp. 203–206; Frisancho, 1923, p. 321) by laws promulgated in 1828. The intention of Republican government was to encourage private ownership (Poblete, 1938, p. 62), with the same disregard of ancient tradition that characterized the early colonists.

The Colonial status of the Indians did not cease with the creation of the Republic. On the contrary, all the exploitative mechanisms of the Colonial government continued in the Republican era. Tribute, for example, although it changed name, being designated as the "contribución de indígenas," continued to be levied. It had to be levied, for the early Republican government, like the Colonial government, depended for at least one-sixth of its income on Indian assessment. Yet the growth of guano and nitrate industries permitted the gradual abandonment of formal tribute in the middle of the century. Thus early efforts to abolish it by legislative means, in 1821 and again in 1839 and 1845, were unsuccessful. But by 1887–88, the attempt to collect tribute failed, yielding less than one-fourth of the expected return. The undisguised tribute levy was finally abolished in the Revolution of 1895 (Belaúnde, 1932, pp. 91–94). For all practical purposes, nevertheless, government continued to depend upon income raised from Indians. After the great national impoverishment of the War of the Pacific (1879–82), when Perú lost her resources of guano and nitrates to Chile, tribute was taken in the form of taxes upon consumers' goods. Another survival of Colonial institutions may be found in the rapid growth of vast estates in 19th-century Perú. Gamonalismo, or latifundismo, shows close affinities to the Conquest phenomenon of encomienda. On the great haciendas, the creation of a large class of colonos, alienated from their communities and enjoying the use of land only in return for labor, resembles the immense yanaconate of the 16th century. Yet in the late 19th century, the emergence of military governments, in which power was secured by maintaining a substantial military establishment drawn from the Indian populations, evokes the Crown corregimientos of the Early and Mature Colonial Periods with their need for mining labor. A military government, such as that of President Cáceres, depending upon Indian army personnel, has a great interest in the maintenance of the communes; therefore, a high degree of laissez faire was permitted them. The mita finally survived under a new name. Called faena, it is the familiar performance of draft-labor enterprises both on the haciendas and in public works (Kaerger, 1901, 2:330). Its volume, however will not bear comparison with the Colonial mita, in which the service of the mines engaged nearly all Highland populations.

CULTURAL CHANGES

SUBSISTENCE ACTIVITIES

The potential subsistence activities of the Colonial *Quechua* were enriched by new introductions of two separate kinds. In the first place, the Spaniards brought to Perú many European cereals, fruits, and animals; in the second place, certain American cereals and fruits, unknown in Perú before the Conquest, were introduced from the Antilles, New Spain, Central America, or eastern South America. A case in point is the introduction of pines with edible nuts from New Spain (Cobo, 1890–95, 2:403). The abundant presence of an imported species in Perú, however, does not necessarily signify its acceptance by the *Quechua* for their own use. From the early decades of the Colonial era, many Indians raised some crops merely to satisfy tribute demands which were levied in kind. For example, wheat and sheep might be raised in large quantities by Indians whose tribute assessment was so heavy that it did not permit them to consume any part of the yield (Cobo, 1890–95, 2:347). Where cash payments of tribute were customary, the European crops and herds were regarded as a means for earning money. Father Cobo, writing in 1652, reports that the Indians in Lima were able to distinguish carefully and in detail between native and imported plants and animals (Cobo, 1890–95, 1:333), and his account of these various species reverts continually to the fact that many European introductions had not been adopted by the Indians. Among the Highland tributaries, for instance the typical daily intake of food consisted of maize, grasses or herbs, dried alpaca or llama meat, quinoa flour, and potatoes (Messia, 1600, *in* Lorente, 1867–72, 2:348; Loaysa, 1889, p. 600). All were Indian foods; European cereals, fruits, legumes, or meats are not mentioned.

The reasons for the various acceptances and rejections are closely associated. In the first place, the process whereby the new plants and animals were distributed throughout Perú may be compared to the process of fractional distillation. With each substantial change in altitude or climate, certain groups of species were unable to survive or adapt themselves to the new conditions. Such was the case with wheat (*Triticum sativum*). With increasing altitude, the prices for wheat rose, until finally it became inaccessible to the puna dwellers, who could neither buy it nor grow it for themselves. Such was also the case with many fruits: date palms, figs, pomegranates, quinces, olives, and bananas were restricted to the low, moist, warm parts of Perú and to Spanish use. In the 17th century, even stock breeding underwent a differential separation by altitude. Cobo tells us that in his time horses could not be bred at great altitudes, as in the Collao, unless the foals were surrounded with great care. The animals, therefore, had to be imported, fully grown, from lower regions (Cobo, 1890–95, 2:351). Cattle, on the other hand, were bred at altitudes where young horses could not survive. The prices for cattle were lowest in the Collao; near Lima, on the contrary, and along the Coast, where stock breeding was more difficult, the prices were very high (Cobo, 1890–95, 2:358–59). Hence, an initial condition for *Quechua* acceptance of any European subsistence activity was that it be adaptable to either or both the intermediate and the extremely high zones of altitude.

A second condition for specific success among the *Quechua* resided in the fact that even those species which withstand a variety of altitudes must meet with no close competition from familiar Indian species. The extraordinary success of horse and cattle breeding in Highland Perú may be assigned in part to the fact that for the Indians European draft animals and cattle supplemented very widely the benefits to be derived from the llama. They bore heavier loads, moved more freely from one altitude to another, yielded more by-products, and were adaptable to more uses than the llama. A team of oxen was not uncommonly the property of an Indian family (Haenke, 1901, p. 106), and the animals were frequently used as beasts of direct burden. This was especially true in Cuzco Province, where the Indians made a practice of breaking the oxen to many tasks reserved elsewhere for asses and mules (Cobo, 1890–95, 2:359). The use of cattle may be said to have been fully assimilated by the *Quechua*. Dried beef (charqui) and cheeses became valued elements of diet. The leather industries were assiduously cultivated, especially in the manufacture of all kinds of bags, panniers, and frails. Tallow was used for the manufacture of candles, highly esteemed by the Indians, to whom this form of artificial light was unknown in antiquity. Cobo even reports upon Indian bullfighting as early as 1610 in Cuzco (1890–95, 2:358–59). To meet their tribute obligations, finally, many Indians were obliged to raise cattle to produce the hides, beef, and tallow necessary to the White colonists and for foreign export.

It is interesting to note, on the other hand, that European squashes and gourds had little success in Perú, for the simple reason that they differed too little from extant Indian varieties, which amply fulfilled all needs (Cobo, 1890–95, 2:436). The same situation prevailed with many European beans. The exception was the broadbean (*Vicia faba*), which has the property of flourishing to altitudes of 3,850 meters, or about 12,500 feet (Sapper, 1938, p. 44). Cobo observes that in the districts of Cuzco or Chuquiabo, broadbeans were planted at altitudes where maize could not survive (Cobo, 1890–95, 2:417). The great success of garlic, especially in the puna districts, may perhaps be assigned to the fact that as a flavoring, garlic satisfied a pre-existing Indian demand for spice without competing too closely with the flavors of Indian peppers. Cobo relates that the Highland Indians made more use of garlic than of any other European produce, and adds the interesting note that onions were restricted to the Coastal plains because of their low resistance to cold (Cobo, 1890–95, 2:431). European turnips, on the other hand, had little success because, as Cobo says, they were too much like the many Indian varieties of edible roots (1890–95, 2:430).

But sugarcane (*Saccharum officinarum*) had immense success in Perú, not only because it could be cultivated within altitudes under 2,600 meters (about 8,400 feet), in the deep Highland valleys (Cobo, 1890–95, 2:409; Sapper, 1938, p. 44), but also because of its great variety of uses. Cobo expresses wonder at the vast quantity of sweets consumed everywhere in Perú, and he notes that the pressed cane itself served as fuel in the absence of wood. Tobacco, on the other hand, which was extensively grown by the *Quechua*, was never taken by the *Quechua* other than medicinally, even within the urban sphere of Lima (Haenke, 1901, p. 107). Called sayri, or topasayri, it was grown for European consumption. Within Indian life, it could not compete with coca as a narcotic.

A third condition for success may perhaps be postulated as follows: The cultivation or care of the imported species must involve neither an excessive surcharge of labor nor any radical change in the Indian habits of farming and husbandry, unless its value, as with beasts of burden or sugarcane, is so great as to offset the extra expenditures or adjustments. The case of grapes and the wine industry will illustrate the point. Although a few species of wild grapes grew in South America before the Conquest, the domesticated grape was unknown until the arrival of the Spaniards. The first European grapes marketed in Perú were offered in Lima in 1551 (Cobo, 1890–95, 2:378). Before 1652, the Valleys of Ica, Nasca, and Pisco had become great vineyard centers, producing large quantities of wine for export. The industry was soon transferred to appropriate districts in the Sierra, as Asángaro Province, or the Cochabamba Valley, or Paspaya Valley (Vázquez de Espinosa, 1942, pp. 619, 621; Cobo, 1890–95, 2:380). But throughout Perú, the use of wine was common only among Hispanicized Indians of some wealth, and Haenke notes that it was never purchased by ordinary Indians, who preferred either chicha or the stronger aguardiente made from sugarcane (Haenke, 1901, p. 107; Cobo, 1890–95, 2:380). It should be emphasized that a vineyard has no other purpose than to produce grapes for wine, unlike corn or sugarcane fields. Both corn and sugarcane yield food, drink, fodder, and fuel; vines yield only grapes, and preempt valuable food-growing land. Thus vineyards may be classified among those elements of European agriculture which found commercial acceptance in Perú, but failed to pass into the *Quechua* community economy.[2]

The same classification may be applied to many European fruit trees. Apples, peaches, and apricots, citrus fruits, almonds, and plums all grew well in the temperate valleys of the Highland, especially in Arequipa, Cuzco, Huamanga, and Huánuco districts (Cobo, 1890–95, 2:393–95), but the land necessary for the planting of orchards and groves could not easily be afforded by the Indian communities, with their reduced control of the fertile valley bottoms. Nor could the specialized care of fruit trees be easily reconciled with traditional Indian habits of agricultural labor. The *Quechua* cultivation of maize or potatoes has a rigid, semiceremonial character (see Poma de Ayala, 1936, pp. 1,130–60), little affected by European tools or methods. No alien crop or harvest of marginal value could be assimilated which interfered too largely with the rituals of communal agriculture.

In the fourth place, it should be pointed out that some acceptances are conditional upon others. The integral acceptance of cattle raising and horse raising necessitated the growing of certain feed crops. Thus the great spread of alfalfa (*Medicago sativa*) in Colonial Perú is a function of the diffusion of beasts of burden. Indian selectivity among European cereals was strongly conditioned by the suitability of the species for fodder. Cobo provided extremely interesting notices (1890–95, 2:416–17) to the effect that barley (*Hordeum vulgare*) and rye (*Secale cereale*) were little cultivated in the mid-17th century, in spite of the fact that barley withstands far higher altitudes than wheat, being cultivated today at levels higher than 13,000 feet (4,100 m.) (Sapper, 1938, p. 44). The reason may well be that alfalfa and maize provided the necessary fodder at less cost of labor than barley and rye. These cereals, on the other hand, could not compete successfully with wheat, which was preferred by Spaniards, nor with maize and quinoa, which remained the staples of *Quechua* diet. Rice, it might be noted, found a congenial environment in the tierras yungas of the Coast and eastern Highlands, where neither wheat nor barley might thrive (Cobo, 1890–95, 2:416); there it served the European need for some basic cereal other than maize, although there is no evidence that rice was an appreciable addition to Highland *Quechua* diet. Thus, one gains the impression that none of the Colonial cereals imported from Europe had more than local triumphs over native maize, potatoes, and quinoa. With garden vegetables, so highly esteemed by the White colonists (Cobo, 1890–95, 2:432–34), no Indian acceptance can be shown. Not only was produce gardening too highly specialized an activity, but there were no by-products, and the vegetables, such as lettuces, cabbages, and so on were not related to any preexistent need in Indian life.

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[2] Cobo, however, provides the interesting note that the Peruvian custom of treading the grapes in cloth sacks was an Indian invention, developed in Nasca Valley (Cobo, 1890–95, 2:380).

It is not unlikely that the adoption of one member of a closely related group of species precluded the immediate assimilation of other members of that group. For example, Cobo relates that asses and mules were not nearly so extensively raised in his time as horses and cattle (Cobo, 1890–95, 2:362). And wheat appears to have triumphed over barley before 1653. Similarly, chickens flourished abundantly (fig. 36, *d*). Eggs and fowls were required in most tribute lists. Cobo opined (1890–95, 2:376) that no other European barnyard animal had thrived so extensively in Perú. The Indians themselves, it should be noted, rarely killed chickens or ate eggs, preferring always to market both (Haenke, 1901, p. 106).[3] The corollary of this commercial assimilation of chickens is perhaps to be found in the fact that geese were not introduced until the end of the 16th century (Cobo, 1890–95, 2:377). Pigeons, nevertheless, had multiplied greatly by 1650, and were widespread throughout Perú. Yet with this general proposition, that the assimilation of one of a group of species precluded the immediate adoption of others, some measure of historical change is present. At the end of the Colonial era many Highland provinces were notable mule-raising areas (e. g., Tinta), while in others barley and rye were more extensively cultivated than in the 17th century. Thus with the maturity of the Colonial economy, the diversity of the mother-country's plants and animals came gradually to be reproduced.

Among the European species which satisfied all the requisites for Indian assimilation must be listed pigs, sheep, and goats. They survived at different altitudes; their by-products were numerous; they did not endanger the equilibrium of the community economy by special needs in fodder and care; and their maintenance was not foreign to people long accustomed to llama-raising activities. Pigs, of course, were the earliest European food animals to be introduced, because of the conquistadors' habit of sustaining themselves with droves taken along for the purpose. In 1650, Jauja and Cuzco were the centers where the best animals were raised. In the Highland, lard was valued not only as a food but also for the cure of a llama mange (Cobo, 1890–95, 2:365). An index to the relative populations of cattle and pigs may be derived from the fact that soap, in Perú, was manufactured from tallow rather than from lard (as in New Spain), suggesting how much more numerous cattle were than pigs. Cobo does not give the impression, however, that sheep were especially numerous in his day. They flourished better in the Collao than in tierras yungas. Their introduction powerfully enriched Indian textile and felt industries (Cobo, 1890–95, 2:366). Goats likewise flourished best in the Highland, and also on the Coastal plains, wherever the diet of native grasses and bushes was suitable, but not in the moist, warm tierras yungas. Associated industries were the production of salted meat, pot cheeses, hard cheeses, fats, and butters, as well as hides and wool (Cobo, 1890–95, 2:366–67).

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[3] Cobo reports that cock fighting was not practiced in Perú before his time, although he had observed it in New Spain, where it was introduced by Chinese (1890–95, 2:376).

Finally, Cobo, who alone in the Colonial era speaks with authority upon these matters, enumerates species introduced from Africa or Asia, and some adopted by the Indians for purposes other than food or draft. Camels, which were introduced from Africa in the mid-16th century, flourished at first on the Coastal plains but could not compete with mules and horses, and so became extinct around 1615. (Cobo, 1890–95, 2:442, Montesinos, 1906; Acosta, 1940, p. 318.) Chinese dogs and the sway-bellied Asiatic pig, as well as guinea hens, were introduced without great success (Cobo, 1890–95, 2:443). European house cats multiplied extremely and were prized by Indians, who maintained them to keep down rodents (Cobo, 1890–95, 2:374).

It remains extremely difficult at this distance from Colonial life to tell with accuracy which species found full acceptance by the *Quechua* and which remained at the commercial periphery of their activities. The situation surely varied greatly from province to province, and, in any case, the commercial or tribute-raising activities of the *Quechua* cannot be rationally declared as non-*Quechua*. Precisely these activities often formed an integral part of Colonial Indian life.

URBANISM

New towns.—*Quechua* town life was deeply affected by the program of reurbanization known as reducción, signifying the concentration of scattered groups of farmers and shepherds into a limited number of new, stable, and relatively large urban environments. It was achieved at state expense, by properly designated officials under strict supervision.

After 1569 Viceroy Toledo found it desirable to expand and generalize the technique of the reducción. In spite of the work of his predecessors, Toledo found that the Indians were still living in such scattered and inaccessible settlements that effective missionary work was virtually impossible. The Indians preferred to live in dispersal, remote from Spanish supervision, and close to the pacarinas, or places of mythical origin, although it was in such circumstances that the Indians were most heavily subjected to the tyrannies of their curacas. Hence, the campaign of reurbanization was intended not merely to improve conditions for the exploitation of Indian labor, but to clarify and regulate the structure of Indian authority, to reduce excessive Indian litigation over land titles, and to isolate the Indians from undesirable elements in the European population. (Lorente, 1867–72, 1:5 ff., 13 ff., 16–18 ff.; Zimmermann, 1938, pp. 72–73; Vega, 1896, p. 302 ff.)

These new settlements were usually located halfway between the valley bottoms and the high plateaus, in order that the inhabitants might, in typical *Quechua* fashion, have access to the high pastures for their flocks, and to the valley bottoms for their crops. A further advantage derived from such locations was the security from floods and run-off torrents. Many of the settlements had artificially leveled plazas, with the church at the center or to one side.

Churches.—The most pretentious edifices are usually located in the European towns, but not infrequently, as along the western shores of Lake Titicaca, at Chucuito or Pomata or Puno, extremely elaborate churches were built by Indian labor under European supervision for Indian use (Mariátegui Oliva, 1942). Their construction and decoration involved elaborate outlays of money and labor. Few if any monuments outside Cuzco may be definitely assigned to the 16th century; as with the cofradías, the intense and extensive campaigns of building activity cannot be assigned to any period earlier than the mid-17th century.

As elsewhere in Spanish America, the costs of church building were borne by the Indian community. In settlements where churches were needed, the cash funds were assigned by episcopal order from the tribute share produced on the repartimiento. The tribute, of course, was levied from the Indians. It was expected, in addition, that the Indians donate the labor involved; this levy was accomplished through the mita.

Yet it would be a falsification to assert that all Colonial church-building was in the nature of forced labor. On the contrary, a communal solidarity was given expression by sustained labor upon a fine edifice destined to serve the religious needs of all settlers and to house the ritual life of the agglomeration. An otherwise unprepossessing town was given distinction over its neighbors by the possession of a good church. Furthermore, the building crafts learned in the process of erecting a church redounded to the benefit of local construction activities. The firm foundations, solid walls, and substantial roofs or vaults of the church were the training ground for many new craftsmen in the community, who might thereafter employ their skills in house building or in paid employment among neighboring towns.

Occasionally, however, a small community without particular need for a sumptuous religious establishment, achieved the construction of an elaborate temple and dependencies. Such was the case at Copacabana, where an important pilgrimage site developed during the Colonial era. At Copacabana, an image of the Virgin manufactured by an Indian came to acquire the reputation of working miracles. The site itself already had possessed some importance before the Conquest as a religious center, and in the Colonial era its character as a holy place was soon established. Large processions of pilgrims came annually to attend its festivals, bringing to the site the wealth with which to enlarge the sanctuary (Vázquez de Espinosa, 1942, pp. 611–12). Such was also the case at Pacasmayo, where the shrine of the Guadalupe Virgin attracted many thousands of Indian pilgrims for the festivals held each year on December 8. Dr. Cosme Bueno noted, however, in the third quarter of the 18th century, that the Pacasmayo cult had fallen off greatly, suggesting that the epoch of the great Indian pilgrimages had passed its peak. Other important pilgrimage sites of the Colonial epoch were located at Chaypi in Parinacochas, where a statue of Our Lady of the Rosary was venerated by many provinces. In the same province, at Chumbi, was situated a supposedly miracle-working painting of Our Lady of the Assumption. In Vilcashuaman, at Huambalpa, a statue of the Virgin also attracted pilgrims; similar images were located at Cocharcas, near Chincheros in Andahuailas, and at Sabaya in Carangas Province. The miraculous cross of Carabuco in Omasuyos Province retains its popular attraction even today.

DRESS

The Indian costumes portrayed by Guaman Poma before 1613 (Poma, 1936) suggest that Hispanicization of dress corresponded closely to rank. Among men, the great Indian nobles wore full European costume (fig. 36, *a*) consisting of brimmed felt hat, the cloak with stiff standing collar, the slashed doublet, full-bottomed knee breeches, garters, stockings, and shoes (Poma, 1936, p. 741). Guaman Poma portrays himself in this fashion (ibid, p. 366). An alcalde mayor, however, wears the Indian tunic (ibid, p. 792), and lesser Indians wear the cloak without standing collar, as with an Indian mining captain (ibid, p. 531). In another plate, three Church officials are shown: the sacristan is in full Spanish costume; the fiscal wears only the breeches, the shoes, and the hat; and a musician is in Indian dress except for his European hat (ibid, p. 661). Young choristers (ibid, p. 670) are in full Indian dress except for felt hats, which probably designate them as the children of officials.

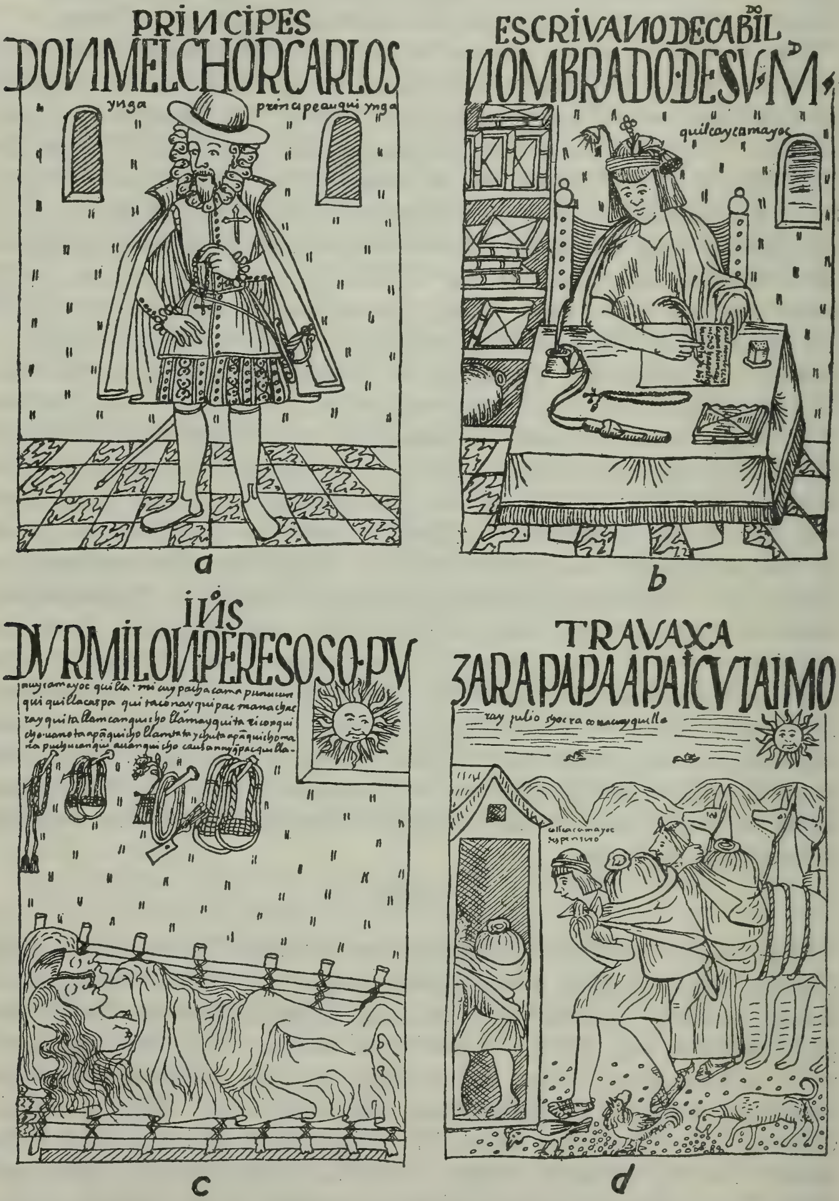

PRINCIPES
DONMELCHORCARLOS
ynga
principeauqui ynga
a
ESCRIVANODECABILDO
NOMBRADO·DESV·M
quilcaycamayoc
b
DVRMILONPERESOSO·PV
c
TRAVAXA
ZARAPAPAAPAICVIAIMO
d

FIGURE 36.—Colonial Perú. *a*, Don Melchor Carlos Inga; *b*, a municipal scribe; *c*, an Indian domestic interior; *d*, the July harvest, showing dogs and chickens. (After Guaman Poma, 1936, pp. 739, 814, 871, 1049.)

Among the women, Indian dress persisted intact at high rank. A great lady (coya) is shown in the lliclla fastened by a jeweled tupu (ibid., p. 757). Vâzquez de Espinosa notes a few types of regional women's headgear. In Los Canas a coiled black scarf was worn, but in the Collao, women affected high black woolen bonnets surmounted by crescent-shaped ornaments (Vâzquez de Espinosa, 1942, pp. 602, 606).

In 1793, Haenke observed that the process had been reversed; among ordinary Indians the women's costume was most thoroughly Hispanicized, and the men retained old-fashioned dress (Haenke, 1901, p. 100). It may be that in Haenke's time the traditional Indian female costume stood much closer to European style than in the 17th century, and that the men's costume looked Indian because it was archaic, retaining many 17th-century elements (pl. 86). Such, at least, has been the history of peasant costume in Europe.

The dress of the great hereditary Indian curacas in the 18th century continued to approximate European court styles (fig. 43, p. 393) An example is given by Tupac Amaru's costume in 1781. He wore blue velvet suiting with gold braid, a cloak of the same material in scarlet, and a three-corned hat over the *Inca* fringe upon his forehead. But over the velvet suit was a richly embroidered unco; and from a gold chain at his neck hung a golden figure of the Sun (Angelis, 1836–37, p. 11).

Among ordinary Indians, the poncho (pl. 91), which differs from the unco in that the side seams are left unsewn, was introduced, probably from Chile, in the 17th century (Montell, 1928, pp. 238–42). The uses of the poncho are closely associated with horseback riding. Skinner (1805, p. 349) points out that it was ultimately adopted by Spanish cavalry in Europe, for its protection to horsemen against the weather (pls. 91, *top;* 92).

MANUFACTURES

No aspect of Colonial life is so poorly studied as its material culture. It is impossible at present effectively to distinguish among Indian, Mestizo, and Creole productions; the regional manufactures are badly confused, and the periods of workmanship show great lacunae, especially in the 16th and 17th centuries.

Of extraordinary importance is the fact that the *Quechua* communes often established and owned community workshops. Mita laborers were assigned to these establishments, from which the income was reserved for tribute payments. Such workshops were usually given to textile production (Peña, 1698, p. 332). Nearly every Highland province supported textile industries; obrajes are recorded for Cuzco, Huaylas, Cajatambo, Conchucos, Huánuco, and Cajamarca Provinces. (Manso, 1859, p. 149; Bueno, 1763–78, n. p.; Vázquez de Espinoza, 1942, passim; Zimmern, 1944.)

Certain districts at the eastern frontier made a specialty of lumber industries, and in Angaraes Province, many Indians were carpenters and joiners, producing furniture for sale in neighboring districts. At Racche in Tinta Province, ceramic containers were manufactured, and glass factories existed in Cochabamba Province. In La Plata Province, the cylindrical wooden vessels for chicha, called keros, were made and painted. Huánuco supported a local industry of manufacturing roof tiles from the rinds of gourds (Vázquez de Espinosa, 1942, pp. 448, 655).

Silversmithing was an important industry, of which the main Colonial centers were Cuzco and Jauja, where the Indian craftsmen continued to use the cubical bronze hammers of antiquity (Vázquez de Espinosa, 1942, pp. 475, 599). Specifically Peruvian are the stirrups, braziers, tupus, and alms dishes of Colonial manufacture (Harcourt, n. d.).

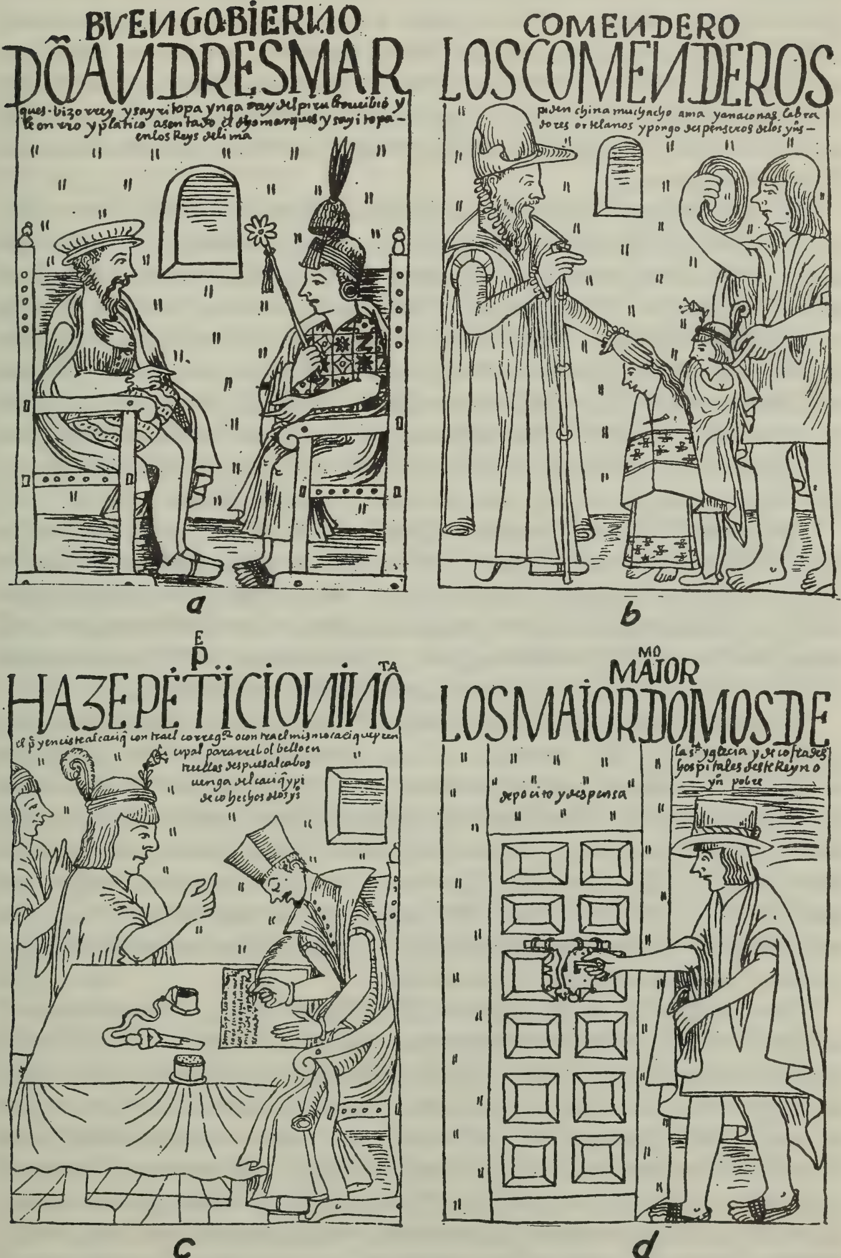
SOCIAL AND POLITICAL ORGANIZATION

Encomienda.—The conversion of the individual Indian from the status of an *Inca* subject into a Colonial *Quechua* was achieved by means of the Spanish grants known as encomiendas. The reorganization of Indian society, the orientation of the economy, and the adulteration of native religion were made possible by this systematic insertion of Spaniards as colonists at all points where a dense Indian population existed.

The term encomienda designates the fiduciary commission of the labor of Indians to a White colonist who is their trustee. The Indians providing the labor constituted the repartimiento; the colonist is the encomendero (fig. 37, *b*) (Torres Saldamando, 1879–80, vol. 3). The encomendero owned no title to the land on which the Indians of his repartimiento worked and lived, although he was entitled to a fixed share of the fruits of their labor.

In the exercise of his rights, the encomendero destroyed the agrarian economy of the region by demanding tribute in precious metals and stones, or in kinds of produce which were not locally grown. To enforce his demands, the encomendero was obliged to terrorize the curaca, who in turn terrorized the tributaries in his charge (Santillán, 1879, p. 55 ff.). This situation arose in part because the encomendero was forbidden to visit the Indians of his repartimiento or to demand any hospitality from them. The law was more often broken than observed, but in theory all supervision over the Indians was meant to be exercised by the curacas and the resident clergy, but not by civilian colonists (Anonymous, 1889, p. 166).

Matinzo describes in detail the internal, or "minor," government of each repartimiento. As in pre-Conquest society, the moieties, called Hanansaya and Hurinsaya, were maintained. Each had its chief


BVENGOBIERNO
DÕANDRESMAR
ques · bizo vey y sayri topa ynga vay del piru Rescibió y
te onrro y platico asentado el dho marques y sayri topa
enlos Reys de lima
COMENDERO
LOS COMENDEROS
piden china muchacho ama yanaconas labra
dores ortelanos y pongo despenseros delos yns
E
P
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cupal para rreuol bello en
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uenga del caciq y pi
decio hechos delos yns
MO
MAIOR
LOS MAIORDOMOS DE
las sta yglecia y de cofradias
hospitales deste Reyno
yn pobre
deposito y despensa
a
b
c
d

Figure 37.—Colonial Perú. *a*, The Viceroy Cañete and Sayri Tupac; *b*, an encomendero with Indian servants; *c*, a curate and curaca; *d*, the mayordomo of a cofradía. (After Guaman Poma, 1936, pp. 440, 551, 588, 688.)

(primera persona, segunda persona), who refrained from all interference in the affairs of the opposite moiety, with the exception that the Hanansaya chief (primera persona) enjoyed precedence in matters of protocol. Each moiety consisted of several ayllus, and at public functions the representatives (curacas) of the ayllus of the Hanansayas were seated on the right, on slightly more elevated positions than the Hurinsaya curacas.

The primera persona held the right to call meetings and direct general business in the sense of the chairman of a committee. He was also the public accountant, possessing greater skill in arithmetic than many Spaniards. The curacas of each ayllu were entrusted with the collection of tribute. The total tribute for the community was deposited by the primera persona with the corregidor, who placed it in the community cashbox (caja de comunidad), to which he and the primera persona held the keys. The primera persona also selected and assigned the Indians to the work at the mines, in the Spanish settlements, in the tambos, and at all the various forms of draft labor.

The living of all these various officials was supplied out of the tribute collected from the community. Although the curacaships and higher offices were traditionally hereditary, in the Colonial era the rule was that the curacas and other officials sanctioned by the Spaniards had arisen to their posts by cunning and by connivance with the encomendero or with the visiting judge (Loaysa, 1889, pp. 586–89).

In general, then, most rich areas of Perú were caught during the 16th century in the network of the encomiendas. Few provinces escaped colonization, and even there, as in the case of the Neo-*Inca* in Vilcabamba, the flight from European culture produced alienating effects in Indian society. Colonial Indian life as a whole was brought into being by the encomienda; as such it was a creative institution, mediating European culture for large native populations. At the same time, however, the proliferation of repartimientos brought about certain deep disorders in Colonial life.

For example, by royal decree of October 28, 1541, the pastures and streams were reserved for communal use by all members of Colonial society (Montesinos, 1906, 1:119). In practice, however, the vast holdings of the Europeans in livestock rapidly crowded available pasturage to a saturation point at which the Indian was excluded from large stock-raising activities. Thus, although the encomendero often was granted no title to any land (Falcón, 1867, p. 459), he had access to such a reservoir of free labor that he could accumulate huge herds, 2,000 to 20,000 head in number. In some areas, not only the communal pastures but also the food-growing areas were preempted for the nourishment of these herds. As the land was withdrawn from Indian use, so also were the irrigation waters brought under European control, so that the Indians could neither raise adequate crops nor water their own few cattle. A contemporary observer notes that the Spanish stock-breeding industry, made possible through encomienda, was partly to be blamed for the great losses of population suffered during the 16th century, since the Indians were forced to move their fields higher and higher, in barren and rocky terrain, where the yield was capable of sustaining but a fraction of the former population (Molina of Santiago, 1916, p. 149).

The same general effect was produced by the foundation of towns and monastic establishments. In Highland Perú, arable valley bottomland is the most valuable possession in Indian society. An exquisite balance between cultivated land and population density had been achieved under the *Inca* regime. With the advent of the Spaniards, however, the foundation of numerous towns on bottomland incapacitated the best soil for agricultural production. The Indians previously resident upon the site of the town were forced to emigrate or to enter Spanish service through encomienda (Lorente, 1867–72, 1:22; Anonymous, 1889, p. 183).

The process whereby the Indian was expelled from the regions of arable soil was further accelerated by direct purchase. The situation was such that the Indians, to escape the heavy labor drafts attendant upon encomienda service, sold their communal lands at low prices (Montesinos, 1906, 1:254, 282). At all times the sale of land by Indians to encomenderos was subject to regulation, but by 1562 cheap sales had become so numerous that further transactions were forbidden excepting by viceregal license.

Another pernicious effect of encomienda was that the native animal resources of the Highland were systematically destroyed to make room for European stock. All the colonists participated in the process, even Negroes and Mestizos, until, in 1556, the herds of llamas and deer were so few in the once rich valley of Huamanga that serious food shortages resulted (Anonymous, 1889, p. 187; Montesinos, 1906, 1:243).

Corregimiento.—After the 16th century, the encomienda was displaced by Crown government (corregimiento); the administration of Indians by private beneficiaries was supplanted with the institution of Crown officials called corregidores (fig. 38). Before the constellation of Colonial customs associated with Crown government can be discussed, however, it is important to examine the main events in the decline of the encomienda system.

The tenure of encomienda was never made permanent, in spite of the prolonged agitation by encomienda holders and missionaries. (See Závala, 1935, cap. 6, pp. 183–223.) Yet the number of encomiendas rose to a peak at the end of the century. The following table 3 suggests the spread of the institution for the Viceroyalty of Perú.

Table 3.—*Rise of the encomienda*

Date	Number of repartimientos	Number of encomenderos	Vacant encomiendas	Corregimientos (Crown repartimientos)	Source
1548	----------	----------	300	----------	Zarate, 1870, pp. 181–82; Montesinos, 1906, 1:192–93, 196.
1556	----------	----------	57	----------	Zavala, 1935, p. 326.
1561	477	427	24	18	Ibid.
1574	614	970	6	21	López de Velasco, 1894. Liñan, 1859, pp. 303–04.
1591	775	695	----------	80	Závala, 1935, p. 325; Torres Saldamando, 1879–80, vol. 3.
1628	[1] 575	----------	----------	82	Vázquez de Espinosa, 1942, p. 772 ff.

[1] In but 58 districts listed.

As always with 16th-century statistics, arithmetical inconsistencies appear in the tabulations, but the general sense of the figures is reliable. It will be noticed first that the number of encomenderos rose far more rapidly than the repartimientos. This was possible because many single repartimientos were fractionally assigned to several holders, and because individuals and institutions were frequently granted pensions. These pensions, often called encomiendas, sometimes carried no assignment of Indians. The increase in the number of repartimientos, on the other hand, is explained by new colonizations and by the progressive fragmentation of already extant populations into more numerous encomiendas. Most striking of all is the increase in the number of Crown repartimientos, called corregimientos. By 1628, their number had been stabilized, and thereafter remained constant. The process whereby this was achieved depended upon the fact that repartimientos normally escheated to the Crown at the end of their assignment to private individuals. If the encomienda were granted, as was the custom, for two or three lives or generations, after that period, it reverted to the Crown, to be administered by the corregidor of its district. The number of encomiendas thus incorporated to the Crown was very high at the beginning of the 17th century. In New Spain, for example, there had been 721 encomiendas in 1574 (López de Velasco, 1894); by 1602, only 140 survived (Zavala, 1935, pp. 173, 314).

The appointment of corregidores in private encomiendas was inaugurated by Viceroy Toledo in the 1570's (Lorente, 1867–72, 1:20; Poma de Ayala, 1936, p. 489). Prior to Toledo's government, the Indians suffered heavily from the unnecessary litigation into which they were drawn. Toledo's primary purpose in establishing the corregidores was to reform this situation. The Indians were henceforth required to seek justice from their corregidor, who was also charged with supervising the collection of tribute and protecting the Indians of the repartimiento from unwarranted abuse. In legal affairs, be it noted, the Indians retained the right of appeal from their corregidor to the Audiencia. The living of the corregidor was paid by the Colonial government out of tribute, and in no case was the official to accept remuneration for his services from his Indian clients. Immediately after its institution, this reform interrupted the extortions practiced upon the Indians by the solicitors at the Audiencias, by the clergy, the encomenderos, and the curacas, with the result that

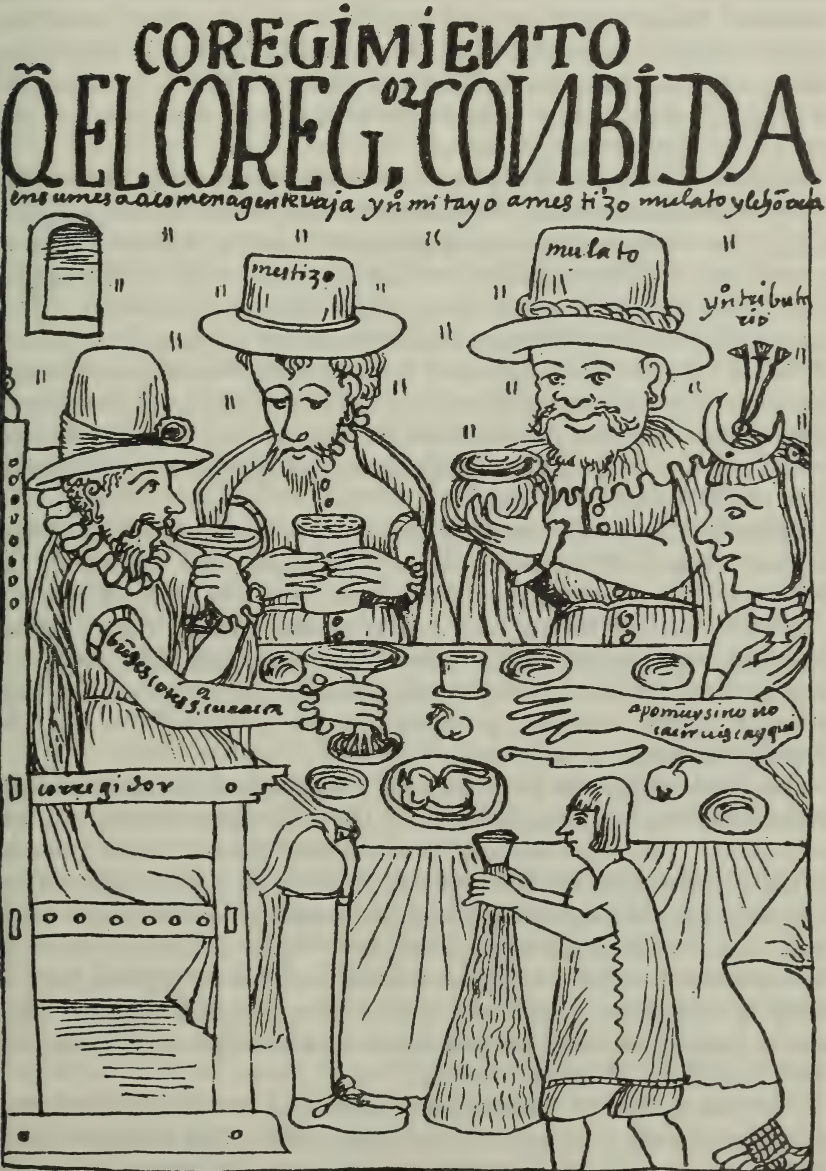

COREGIMIENTO
Q̃ EL COREG.^OR CONBIDA
en su mesa a los menos gente vaja yn̄ mitayo a mestizo mulato y le hõrra
mestizo
mulato
yn tributario
corregidor
apo muy sino no
pro bicias
q̃ los

Figure 38 —The Corregidor's table. (After Guaman Poma, 1936, p. 505.)

Viceroy Toledo felt it essential that the corregidores be continued after his administration (Lorente, 1867–72, 1:20).

It soon became apparent, however, that from the point of view of humane administration, the corregidores were a worse evil than the situation they were intended to remedy. Their salaries were so small that they found it necessary to supplement their incomes with precisely the kinds of extortion they were meant to eradicate. As Whites their residence among the Indians was an exile which they alleviated by illegally surrounding themselves with superfluous deputies and servants (Aponte, 1867, p. 544).

It should be noted that Viceroy Toledo also achieved the elimination of the large numbers of supernumerary Indian officials in each community. The mandones supervising groups of 10 and 20 Indians were suppressed and only the mandones of larger groups, such as the pachaca (100 tributaries) and the pisca pachaca (500 tributaries) survived. Thus, the cost of Indian government was reduced, but in place of the swarm of Indian officials, there appeared the Mestizos, Negroes, and mulattoes with whom the corregidores surrounded themselves (Montesclaros 1859, p. 20). Indian participation in local government was thereby reduced to a minimum that characterized all the subsequent generations of the Colonial regime.

Tribute.—The fundamental quantum of Colonial government was Indian tribute. Tribute maintained the caste and status of the Europeans to whom encomiendas had been awarded. From the various forms of tribute, all public works, religious instruction, monastic foundations, institutions of learning, hospitals, and civil salaries were provided. In the individual Indian existence, the payment of tribute occupied a central position, setting the tone for virtually all forms of activity.

The great differences between pre-Conquest taxation and Colonial tribute must be explained in terms of the differences between the two economies. The *Inca* economy was self-sufficient. Under Colonial administration, however, the delicate equilibrium between population and resources was upset by the introduction of a mercantile economy based upon exports and imports. Vast quantities of local products were traded abroad for necessities and luxury goods, such as wines and textiles, armor and tools. The absolute demand upon Indian productive capacity was raised to a multiple of the capacity itself (Santillán, 1879, pp. 74–75).

The *Inca* system of compulsion to labor had provided an elaborate and efficient scale of rewards for work achieved. The absence of such rewards in the Colonial exploitation of labor seriously affected the social morality of *Quechua* life. Since the curacas of huarangas and pachacas, instead of receiving exemptions for their labors of supervision and administration, were reckoned as tributaries, they found it necessary to exploit their subordinates in order to meet their own tribute payments. Thus the cost of Colonial government devolved upon the members of the society least able to meet the charges, and the moral responsibilities of government were disregarded by the minor authorities.

Mita.—During the protracted disorders following the Conquest, extravagant demands were made upon Indian labor, endangering the basic agricultural and stock-raising economy. A modification of the pre-Conquest mita was accordingly introduced as a measure for stabilizing food production, in which only a limited number of Indians was expected to appear for hire at stated intervals (Montesclaros, 1859, p. 23). The mitayo was paid for his labors partly in cash, in the hope that his sense of monetary values would be affirmed (Liñan, 1859, pp. 303–04). The proportion of draft labor drawn into service varied both according to region and time. Viceroy Toledo had legislated that only one-seventh of the dwellers in any settlement should be liable. In the 17th century, this ratio grew slowly (Montesclaros, 1859, p. 23). By 1620, one-seventh prevailed only for the Sierra, excepting Potosí; one-sixth was the ratio on the Coast; and in the Audiencia of Quito, the most populous area of the Viceroyalty of Perú, one-fifth was drafted (Esquilache, 1620, *in* Memorias, 1859, 1:89).

In the 16th century, the mita had been restricted to public works, but as early as 1615 the legal use of draft labor had been extended to textile manufactures and to mining enterprises. It remained forbidden, however, to utilize mitayos in the search for treasure among the huacas, in the coca industry (cédula of 1609), in vineyards, olive plantations, sugarcane mills, and in lumber industries (Montesclaros, 1859, pp. 25–27).

In any case, the nature of the work done in mita varied according to the resources of the province. In mining areas, all mitayos served the mines, as described below. In agricultural and manufacturing areas, the mita was dedicated to those activities.

The exploitation of the great mines of Perú was achieved at all times during the Colonial era by Indian draft labor. An elaborate mechanism for the administration of this mita was first set up by Viceroy Toledo in the decade of the 1570's. Later on, in the 17th and 18th centuries, the service of the mines enforced many cultural adjustments upon the thousands of *Quechua* families dedicated to it. The entire Colonial epoch in Perú has not incorrectly been designated as a vast religious and political organization for the exploitation of the mines (Belaúnde, 1932, p. 11).

On the basis of the census taken during his visita general, Viceroy Toledo assigned the necessary Indians to the mita of a given mining center from among the provinces neighboring the mines. For example, 17 provinces surrounding Potosí were known to contain a population numbering about 80,000 tributaries. Of these, one-seventh were annually allotted to the mita, numbering 11,199. Each mitayo, however, was not expected to serve more than 18 weeks annually, with the result that a man's corvée fell due but once every 7 years for one-third of a year. In theory, then, no single Indian could be called to the mita of Potosí more than four or five times during his life as a tribute payer, between the ages of 18 and 50.

It should be noted, however, that if the population of a given province dwindled, the mita assignments remained unchanged. In Chucuito Province, early in the 17th century, the mita actually called each individual every 5 or 6 years (Messia, 1603, *in* Lorente, 1867–72, 2:352).

If the draft in a given province could not be mustered, the burden fell upon the curacas. When death, pestilence, or wholesale truancy depleted a community, its curacas were compelled by law to make up the missing man-days by hiring laborers at exorbitant rates (Messia, 1603, *in* Lorente, 1867–72, 2:369 ff.). This substitute labor was recruited from among the indios mingados, who offered themselves of their own volition for hire in the mines at a rate higher than that paid to the mitayos (Montesclaros, 1859, p. 42). In Potosí alone, there were said to have been about 40,000 resident mingados, whose wages in 1601 were twice the rate paid the mitayos (Fernández de Santillán, 1868, p. 451 ff.).

The precise operation of the mita may be reconstructed in some detail from viceregal reports, which dedicated more and more space to the problems of the mines as their resources dwindled during the 17th century. Such impoverishment was, of course, related to the static condition of Colonial mining technology.

The proclamation of the coming mita period was sent out 2 months ahead of schedule to the curacas in each community. The curacas in the minor government of each repartimiento thus had opportunity to muster their men and to receive payments from those Indians wishing to evade the mita (Salvatierra, 1899, p. 30 ff.). Upon being assembled all the mitayos of a given province set out for the mines in a great procession. Thus the mita setting out for Potosí from Chucuito annually consisted of 2,200 Indians with their families, amounting to more than 7,000 persons. Each mitayo took 8 to 10 llamas and some alpacas for meat; the wealthier ones were accompanied by as many as 30 or 40 llamas to carry their corn and potatoes and their sleeping mats. The procession encamped each night of the journey, sleeping under the open skies. Each trip from Chucuito to Potosí was 300 miles (480 km.), lasting 2 months, and involving the movement of 30,000 to 50,000 animals. After 1650, the mitayos were paid a daily rate for traveling expenses.

Of the whole crew, only a fraction returned to Chucuito at the conclusion of their turn. Some had died, and others, having no herds or food left for the return trip, stayed in Potosí, coming under the high charges levied for residence there. Many others preferred not to return home to the local mita of Chucuito, which was additional to that of the mines, and escaped eastward to the relative freedom of the lowland valleys. If, however, the mitayo returned to his home, he had spent 4 months in travel, 4 months at labor in the mines, and 2 months in compulsory service in Potosí.

As the 17th century progressed, not only were the mines themselves becoming exhausted but also their exploitation had depopulated the surrounding provinces. A substantial portion of each mita sent to the mines failed to return to the home province, and the greater part of the losses may be accounted for in terms of fugitives, either to other provinces or to the unconverted areas of the eastern Andean valleys. (Vâzquez de Espinosa, 1942, p. 632; Navarra y Rocaful, 1689, *in* Memorias, 1859, 2:239–45.) About 1603 it was proposed that large, permanent Indian towns be founded near the mines. Actually, the Indians resisted these attempts at industrial urbanization, and the cost of the program was prohibitive because of the fact that most of the land near the mines had long since passed into private Spanish hands. The proposal to establish a permanent settlement for 37,800 Indians near Potosí was never realized. (Messia, 1603, *in* Lorente, 1867–72, 2:357-58; Esquilache, 1620, *in* Memorias, 1859, vol. 1.) In 1720, moreover, the Crown actually commanded the cessation of the mita of Potosí, and its replacement by voluntary labor. The decree was never executed (see Whitaker, 1941, pp. 21, 90), and the mita at the mines continued nearly to the end of the Colonial era (Armendariz, 1736, *in* Memorias, 1859, 3:152).

Money.—Before 1557, the money economy of Perû was conducted in the absence of coinage (Levillier, 1921–26, 1:260–61; Montesinos, 1906, 1:245–46). Later on, when the dies for Peruvian coinage had been widely distributed, they were forged to such an extent by civilians and clergy that the value of Colonial money remained uncertain until Viceroy Toledo reformed and enforced the mint laws (Anonymous, 1889, p. 192). Thus, the use of a monetary medium of exchange was attempted in the absence of valid forms of metal currency. The entire early Colonial system was founded, as regarded economic life, upon the assumption that all values, goods, and services could be assessed in terms of a money that had no physical reality. The pesos, ducados, castellanos, and tomines of Spanish currency were fictional in Perû. The Indian who was entitled to such and such a pay never saw it, but if he were remunerated, it was in bullion or in goods. The confusions arising from this situation were multiple. The powerful debtor could assign arbitrary values of goods to the fixed scales of monetary pay and tribute with impunity. Among the Indians, furthermore, whose notion of property was in terms of tangible objects, such as lands, crops, or herds, all shared communally, the idea of a money-value presented serious difficulties.

Property.—The Indian sense of property can best be understood by reference to pre-Conquest customs regarding inheritance. It was a loose arrangement, in which the appointed successor to an estate provided from its revenues for the support of the family of the deceased. The heirs possessed the estate in common without dividing it, and the property was administered by a representative of the ayllu concerned. Yet no heir could claim a share of the harvest unless he had taken part at its sowing (Santillán, 1879, p. 2–709; Polo de Ondegardo, 1873, pp. 162–63). These customs persisted long after the Conquest, although Europeans often interfered, imposing a written testament designating heirs of their own choosing.

What was true for inheritance was true for property in general. Land belonged to the people who sowed the crops in it; property was a function of participation in the labor of production (Polo de Ondegardo, 1873, p. 164). The Spanish concept of property, however, as derived from the Roman laws of absolute individual ownership, was only partly intelligible to the Indians. The Spaniards, while encouraging the differentiation between rich Indians and poor Indians, frustrated the incipient sense of private ownership by the administrative compromise of imposing tribute exactions upon whole communities rather than upon individuals.

When a curaca, for instance, had attained the wealth necessary to acquire the standard symbols of prestige, such as saddle horses and breeding stock and firearms, he was forbidden to possess them by sumptuary laws. A viceregal decree of 1557 restricted Indian ownership of draft animals to one mule or horse per tributary, and the possession of firearms was illegal at all times (Anonymous, 1889, p. 167; Montesinos, 1906, 1:250). Contradictory social objectives were implicit. The Spaniards were anxious on the one hand to encourage the growth of a responsible sense of individual property among the Indians, and on the other hand to impose caste limits upon Indian ownership. The communal tax or tribute assessments, which were not supressed in Perú until the constitutional guarantee of 1854 (Torres Saldamando, 1879–80, p. 440), faithfully reflect the nature of this contradiction.

Debt-servitude.—The system of debt-servitude affected the lives of free Indians at home. In the 18th century, it was designated as repartimiento, or reparto de efectos, and its administration was in the hands of the corregidores. This 18th-century usage for the term repartimiento has nothing to do with the 16th-century usage, signifying the fiduciary assignment of the labor of Indians. In the 18th century, repartimiento meant the compulsory purchase of draft animals, merchandise and produce, from the corregidor by the Indians of his corregimiento or jurisdiction. Repartimiento as such was not legally tolerated in the Audiencia of Quito; its practice flourished most in Perú (Juan and Ulloa, 1826, pp. 238–46), where the corregidor was the sole legal agent for the distribution of goods. In other words, the Indians could purchase necessities from no one but their corregidor, who thus monopolized commerce with Indians, at prices of his own choosing.

The corregidor, however, was unable to buy animals and manufactured goods elsewhere than in Lima, where the merchants, capitalizing upon the repartimiento traffic, charged already exorbitant prices. Their practice was to unload upon the corregidores the most shopworn and unsalable stocks in their inventory, with the result that the Indian was ultimately forced to accept such marginal luxuries as a yard of velvet, or odd pieces of taffeta and satin, silk stockings, mirrors, earrings, razors (for beardless men), pens and paper for illiterates, playing cards, snuffboxes, and other soiled luxury goods. The repartimiento of produce likewise bore no relation to Indian needs; such items as wines, spirits, olives, salad oil, and so on were forced upon him (Juan and Ulloa, 1826, pp. 248–50).

The distribution took place every 2½ years; the debts thus incurred by the Indian were additional to his tribute load. For the corregidor, one of the most profitable operations of the repartimiento was the traffic in mules. An animal costing the corregidor from 14 to 18 pesos was assigned to an Indian at a price of from 40 to 44 pesos, and its subsequent hire was controlled, not by the Indian owner, but by the corregidor. Of the price of hire, one-half went to the corregidor in partial payment of the purchase price, leaving a quarter for the owner and a quarter with which to pay the mule drivers during the term of hire. (Cf. Angelis, 1836–37, p. 116.) When the animals had been fully paid for, however, the Indian was not free to lease them at will, for all freight was handled by the corregidor as a monopoly to his own profit. Thus, the corregidor made sure that freight was carried by the animals of Indians in his debt. In the long run, the Indian was unable to pay for the mules unless by entailing the value of his crops, his woolens, or his other livestock.

Social classes.—Under the double blows of the Conquest and the encomienda system, *Quechua* society emerged as a far more simple structure than *Inca* society had been. The decapitation of the *Inca* state entailed the collapse of the whole pyramid of authority. In Early Colonial society, however, as the class of encomenderos came into being, each of them absorbed in his community the authorities and ranks of *Inca* officials above the status of the smaller curacas.

Hence, the great contrast between *Inca* and Spanish Colonial government may be designated by the terms "unique hierarchy," referring to the absolute pyramid of *Inca* authority, and "multiple hierarchy," describing the proliferation of practically independent systems of authority on the encomiendas. In theory, the encomendero was forbidden any direct contact with the Indians of his repartimiento, and the controls of justice, religion, taxation, and so on were assigned to as many distinct governmental agencies. In reality, however, each encomendero tended to become the apex of a local hierarchy, exercising in his own person all the authorities of the multiple forms of government.

Curacas.—One of the gravest abuses in Early Colonial society resulted from the interference by the encomendero in the appointment of the curacas (fig. 37, *c*). The encomendero's object was to choose a foreman (sapayapa) for his enterprise who should be dependent upon his patron's favor rather than concerned for the welfare of the Indians. They were usually swollen with importance, living extravagantly from the proceeds of Indian labor (Santillán, 1879, p. 29; Quiroga, 1922, p. 95). They occupied the more solid and well-built houses and were said to eat from vessels of gold and silver. Their farms were stocked with herds and stores of food. Some curacas wore European silks, drank Spanish wines, kept horses, and sought out the company of Spaniards. Others attempted to provide for the needy in their charge, or to help with the tribute when the individual Indian taxpayer found it impossible to meet his share of the communal obligation (Santillán, 1879, pp. 79–80).

In general, however, with the decapitation of the *Inca* state, and with the assistance of the encomendero, the status of each local curaca received a vast increment of power. Matienzo says each of them assumed powers within his community equal to those of the *Inca* Emperor. The good intentions of Colonial government were perverted by a conspiracy among the curacas, the encomenderos, and the religious doctrineros to secure reductions in assessments, all the while levying tribute at an older, higher rate; failing to remunerate the Indians for personal services; and failing in general to comply with the ethical provisions of Colonial legislation. When fined for such abuses of authority, the curacas were indifferent to the penalty, failing to understand the uses or nature of money. The only penalties to which they were sensible were corporal punishment, or exile into servitude (Matienzo, 1910, cap. 7, p. 17).

With the dissolution of the large administrative units of *Inca* society, such as the pachaca (100 tributaries) or the huaranga (1,000 tributaries), the bureaucratic proliferation of officials within the remaining units of society was such that among 100 Indians there were as many officials as there had formerly been for each 1,000 tributaries. If every curaca tended to behave as an *Inca* Emperor, so did the entire *Inca* bureaucratic caste grow up in each unit administered by a curaca (Santillán, 1879, p. 29; Quiroga, 1922, p. 95). On encomiendas of which the Indians were shared by three or four Europeans, as was often the case, each encomendero pretended to appoint his own curaca among the Indians, with the result that the number of officials, or mandones, was multiplied by the number of participant encomenderos, and the previous genuine curaca was displaced, often in violation of ancient authority (Anonymous, 1889, pp. 174, 210).

Hatunrunas.—If *Quechua* society during the Colonial area was ruled by the Whites and policed by the curacas, the object of government and administration was the immense class of hatunrunas, from whose labor the Colonial regime was maintained. Each repartimiento contained hatunrunas, or tributary Indians under the jurisdiction of the minor government (Santillán, 1879, p. 39). The payment of tribute was the basic obligation of the hatunruna, provided from his labor and that of his family. In addition to tribute, each hatunruna was also liable for draft labor.

Yanaconas.—Those Indians, or the sons of those Indians, who had abandoned their ayllus to live as servants among the Spaniards were defined as yanaconas (Matienzo, 1910, pp. 18–20) in the 16th century. They were tacitly exempted both from payment of tribute and from service in the mita. On the whole, their condition was superior to that of the hatunrunas still living in the ayllus under the domination of the curacas. The yanaconas were regarded as members of the Christian community; they could own property as individuals; and they were allowed to exercise their trades in the cities. In the absence of large numbers of Negro slaves, the Spaniards regarded the yanaconas as indispensable elements for the maintenance of Spanish caste and status (Loaysa, 1889, pp. 603–05; Means, 1932, pp. 164–65).

The hatunruna willingly became a yanacona, because of the exemptions from tribute and from mita, and because of the opportunities for lucrative labor. The encomendero, on his side, regarded the possession of yanaconas as wealth. Thus each encomendero tended to provide himself with servants and slave labor in numbers approaching those formerly reserved only for the use of the *Inca* Emperor himself (Santillán, 1879, pp. 97–98). The methods for the recruitment of yanaconas were various: by kidnapping, by petty inducements, and small gifts, with the result that all the skilled labor of a given community might be drained from it into the yanacona class.

According to Santillán (1879, p. 85), their numbers had been swollen beyond measure after the collapse of the great rebellion of 1536–37. Whereas the yanaconas had been carefully selected and restricted under the *Inca* Emperors, being given property and placed in responsible positions to constitute a reliable laboring class, the Spaniards had perverted this order of affairs through inflation, until there were as many yanaconas as hatunrunas. In the 16th century, then, the yanaconas came to form a rootless, floating proletariat.

During the last quarter of the 16th century, the yanacona class was stabilized by a number of legislative measures, originally proposed by Matienzo (1910, p. 21). Their substance was as follows: The creation of new yanaconas from among repartimiento Indians was forbidden in 1571; those Indians who had become yanaconas since 1561 were forbidden to return to the repartimientos; all vagrant yanaconas were to be assigned to masters; no Negro, Mulatto, or vagabond Mestizo was allowed to hold yanaconas without license; no yanacona might leave his employ, or be expelled from it without proper license; no yanacona might leave the mines at which he was resident; no Spaniard was to allow his yanaconas to wander idle or intoxicated under penalty of fine and expropriation; finally, no yanacona's wife was to be separated from her husband. (Cf. Loaysa, 1889, pp. 603–05.) The final consequence of these regulations was that the yanacona caste gradually returned to the status of the tribute-paying mitayo, and the name survived only in a special and limited sense in the later decades of the Colonial era.

A close bond of interest existed between the yanaconas and the European conquerors and colonists. The defeat of Manco Inca's great rebellion was materially advanced through the opposition of the yanaconas of Cuzco. One of the most peculiar and suggestive aspects of the Conquest of Perú resides in this alliance between the members of a native proletariat and the feudatory Europeans. Two typologically disconnected forms of human society gravitated together, producing a fusion of forces whose importance has never been properly studied. It is in this transfer of the strength of the *Inca* proletariat to the Spanish cause, that we may detect the final and normative form of Colonial society, in which virtually the entire Indian population was leveled to a proletarian status.

The general structure of *Quechua* society contains these few strata: curacas, hatunrunas, and yanaconas. From a highly articulated society under *Inca* rule, *Quechua* life in the Colonial period rapidly evolved toward a two-class system of proletariat and foreman. The higher ranks of Indian authority disintegrated with the suppression of the Incaship; at the other extreme, the yanacona became a dominant class, nomadic in character, and absorbing many elements from the ayllus. Thus we have a vagrant proletariat (yanacona) under immediate Spanish control, and a sedentary proletariat (hatunrunas), the latter immediately governed by the curacas. Of equal significance with the decapitation of the *Inca* state, then, are these phenomena of turbulence induced by the Conquest in the lowest rank of

Indian society. From an intricately organized pyramid, *Quechua* society was crushed into a formless heap of roughly equivalent elements.

TRAVEL

Santillán estimated that in his time, because of their release from the *Inca* interdict upon travel, about one-third of the Indian population of Perú had entered vagrancy (Santillán, 1879, p. 83), and he regarded it as essential that the *Quechua* be stabilized by the government. Other commentators confirm this general impression. The amount of travel in 16th-century Perú was enormous. The roads were filled with Indians bearing tribute in kind from the repartimiento, where it was grown or produced, to the town dwellings of their masters, often over vast distances requiring several months to come and go. A constant flux of mitayos, moving in large companies to the scene of draft labor, also filled the roads (Vega, 1896, pp. 112–13).

Another cause for immoderate Indian travel was unnecessary litigation. The Indians were constantly wandering back and forth between the repartimiento and the seat of their Audiencia to secure legal papers, usually worthless, for which they were heavily charged by the swarms of parasite solicitors and scriveners who made their living in the Spanish cities from this occupation. Legal paper exercised a fascination over the Indians; it was regarded as a talisman, and to the possessor it made little difference whether the paper resolved the litigation for or against his interests. In the possession of paper, he was certain of ultimate redress (Lorente, 1867–72, 1:19). The subjects of litigation usually pertained to communal lands, and rarely if ever involved suits brought by one individual against another. The suits arose over the expropriation of lands previously reserved for the Sun or for the *Inca* ruler (Polo de Ondegardo, 1873, p. 163; Anonymous, 1889, p. 180).

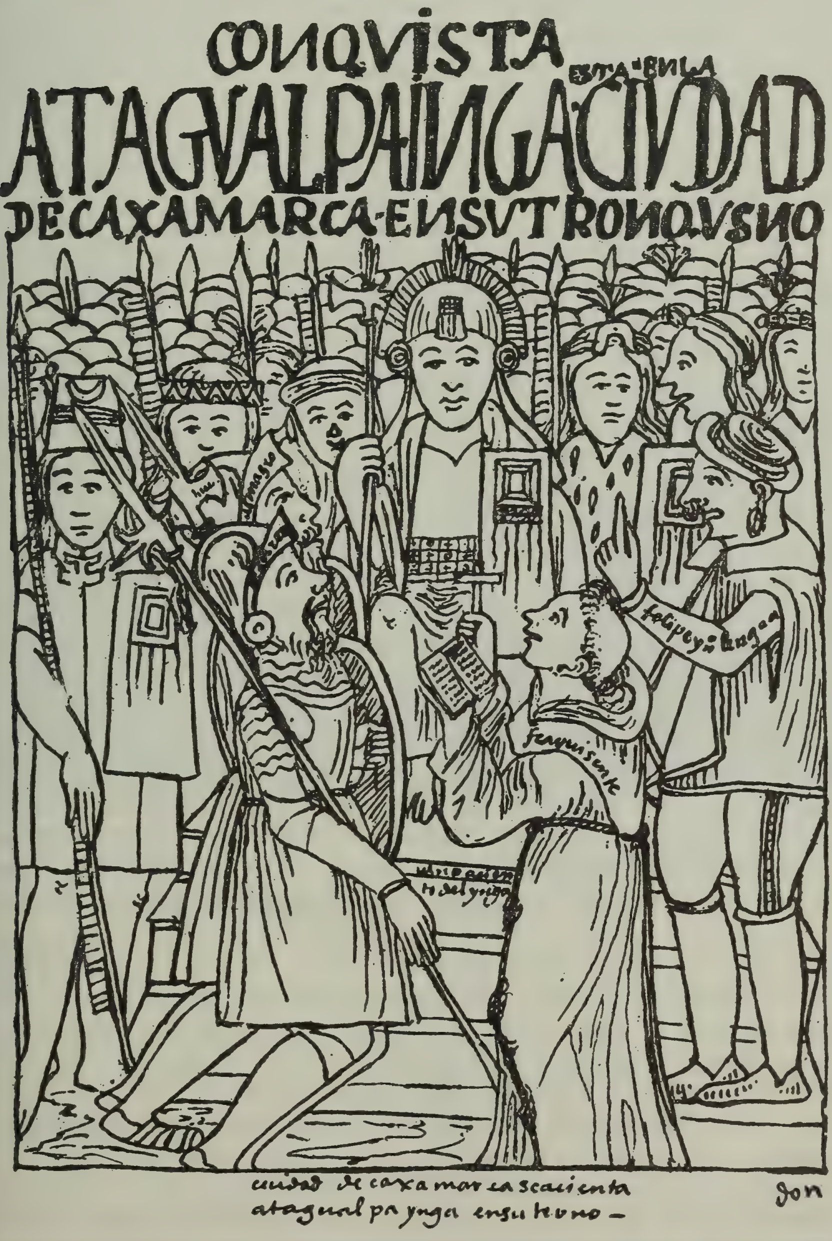
In general, Indian travel, whether compulsory or voluntary, resulted in a substantial increase in the labor load of the individual Indian. The maintenance of roads took up far more labor than in antiquity, because of the need for new highways, and the destruction of all roads by the increased flow of traffic. The damage done by iron-shod horses and mule trains was astronomical in comparison to that done by the footrunners and llama herds of antiquity. Not only were draft Indians responsible for maintenance and repair, but they were called upon to provision the resting houses (tambos) and to provide carriage for goods in transit (Falcón, 1867, p. 478).

WARFARE

The warfare of the *Quechua* posterior to the Conquest was the warfare of rebellion rather than the warfare of a sovereign people. Its chief episodes were the campaigns conducted by the Neo-*Inca* during the 16th century, and the Indian rebellions of the second half of the 18th century. In these efforts, *Quechua* warfare gravitated swiftly towards the superior European patterns. To set a measure for the rate of acculturation, it will be convenient to review the military pattern of the Conquest itself.

The Conquest.—The quick defeat of Atahuallpa by Pizarro at Cajamarca on November 16, 1532, predicates an intricate strategic situation (fig. 39). Before Cajamarca, the Indians regarded the Europeans as marvelous curiosities. The horses were thought to have feet of silver, and the firearms were regarded as animate thunderbolts, as in Tumbez, where the chief poured libations of chicha into the barrel of Candía's weapon. Yet it was believed that the Spaniards were ineffective when dismounted and that the horses were powerless at night without their saddles (Zárate, 1853, p. 476; Pizarro, H., 1872, p. 119). Atahuallpa received advices that the swords were no more dangerous than women's weaving battens (Velasco, 1841–44, 2:89), and he was told that the firearms were capable of firing only two shots (Oviedo, 1851–55, 4:165). These reports were possible only because the Spaniards had never been forced to deliver their full striking power, and Atahuallpa governed his reception of the Spaniards by such fragmentary information. Thus, his belief that the horses were impotent at night determined his procrastinated entry into Cajamarca at dusk on the evening of November 16, instead of at noon, as Pizarro had been led to expect (Pizarro, H., 1872, p. 119). It would be underestimating Indian perspicacity to suggest that the illusion of superior beings persisted long in the Indian concept of the European. His technological equipment was far from mysterious. Horses were not vastly different from llamas. Steel was not incomprehensible to a people possessing bronze, nor was gunpowder inexplicable to the bowman. The Spanish tactics of deployed forces and enveloping movements were used by the Indians, and their armies also were trained as homogenous units possessing the reflexes necessary for coordinated action. The great difficulty, however, lay in reproducing European equipment without the necessary antecedent experience of such skills as horse breeding and training, or the many intricate and precise processes in the manufacture of steel and gunpowder.

That which Atahuallpa fatally underestimated was the ability of the Spaniards to receive sea-borne reinforcements. In his experience and that of his dynastic predecessors, no Coastal society or state could expand beyond the wishes of a unified and powerful Highland group, since the ocean at their backs constituted an impassable barrier from which no aid could come, and their inland expansion was limited by the mountains, where the Highlanders had the strategic advantages, such as control of the headwaters of Coastal streams. Atahuallpa, therefore, regarded the advent of the Spaniards as a Coastal disturbance of little significance where Highland struggles were concerned. Thus, he chose to draw the Spaniards away from their ships, by offering no resistance to their inland progress (Herrera, 1726–27, vol. 5, pp. 39, 81). But had Pizarro delayed longer on the Coast, the capture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DE CAXAMARCA EN SV TRONO VSNO
felipe yn̄ lengua
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ciudad de caxamarca se asienta
ataguallpa ynga en su trono —
Don

Figure 39.—The capture of Atahuallpa. (After Guaman Poma, 1936, p. 384.)

of Atahuallpa might never have been realized, for the European surely would have been forced sooner or later to spend the huge power of surprise implicit in the massed use of his weapons in some preparatory engagement rather than against Atahuallpa himself.

The rebellion of Manco Inca.—In 1535 there were no signs of popular resistance to the Conquest at a high level of spontaneous action. On the contrary, the only resistance was offered by vestigial remnants of the *Inca* armies (Garcilaso, 1722, bk. 2, ch. 9), and by local garrisons which had been assigned to certain areas before the Conquest for the maintenance of regional discipline. There was no cooperation between these forces: each worked independently in pursuit of its own advantage.

Manco Inca, the young protegé of Pizarro, took it as his mission to attempt to weld these residual elements of force into an effective army capable of attacking the Europeans simultaneously in many areas. On April 18, 1536, the Indian army converged upon the four approaches of Cuzco, and set fire to the outlying buildings, working gradually toward the central plaza (Valverde, 1879, p. 12). As the thatched roofs burned away, the Indians gained the double advantage of smoking the soldiers from house after house and so driving them to the center, as in a hunting party where the quarry is driven by bushbeaters to the center of a contracting ring (cf. Cobo, 1890–95, 4:225–26); they also gained the advantage of circulating through the city on the bare wall tops, high above the cavalry charges launched in the streets below (Valverde, 1879, p. 20). The Spaniards countered this last advantage by tearing down the walls of the houses each night when the attackers withdrew. But beyond the city's limits, the Indians had established elaborate systems of staked pits and barricades, such as the one obstructing the road to Lima. On the seventh day of the attack, the Spanish situation looked hopeless (Valverde, 1879, p. 26), but it was relieved by a bold sortie and flanking attack upon Sacsahuaman, held by only 1,500 Indians. Sacsahuaman fell on May 29, and its surrender marked the beginning of the ebb of the Indian revolt from the full and promising flood it had reached during the previous weeks.

The siege of Lima was coordinated with the general campaign, to take place simultaneously with other attacks. It, too, was conducted under orders from Manco, who had arranged that the Indians of the neighborhood of Lima itself, reinforced by Highland groups from Jauja, should congregate at Pachacamac before advancing upon the City of the Kings. There the siege lasted 12 days (Montesinos, 1906, 1:91–92). The Indians, wearing fine textiles and golden ornaments, sought, as in Cuzco, to storm the city by sheer mass, advancing repeatedly from their base on the hill outside Lima, called Cerro San Cristóbal, with the object of frightening the Spaniards to take to their ships in the harbor beyond. At one point these attacks were so

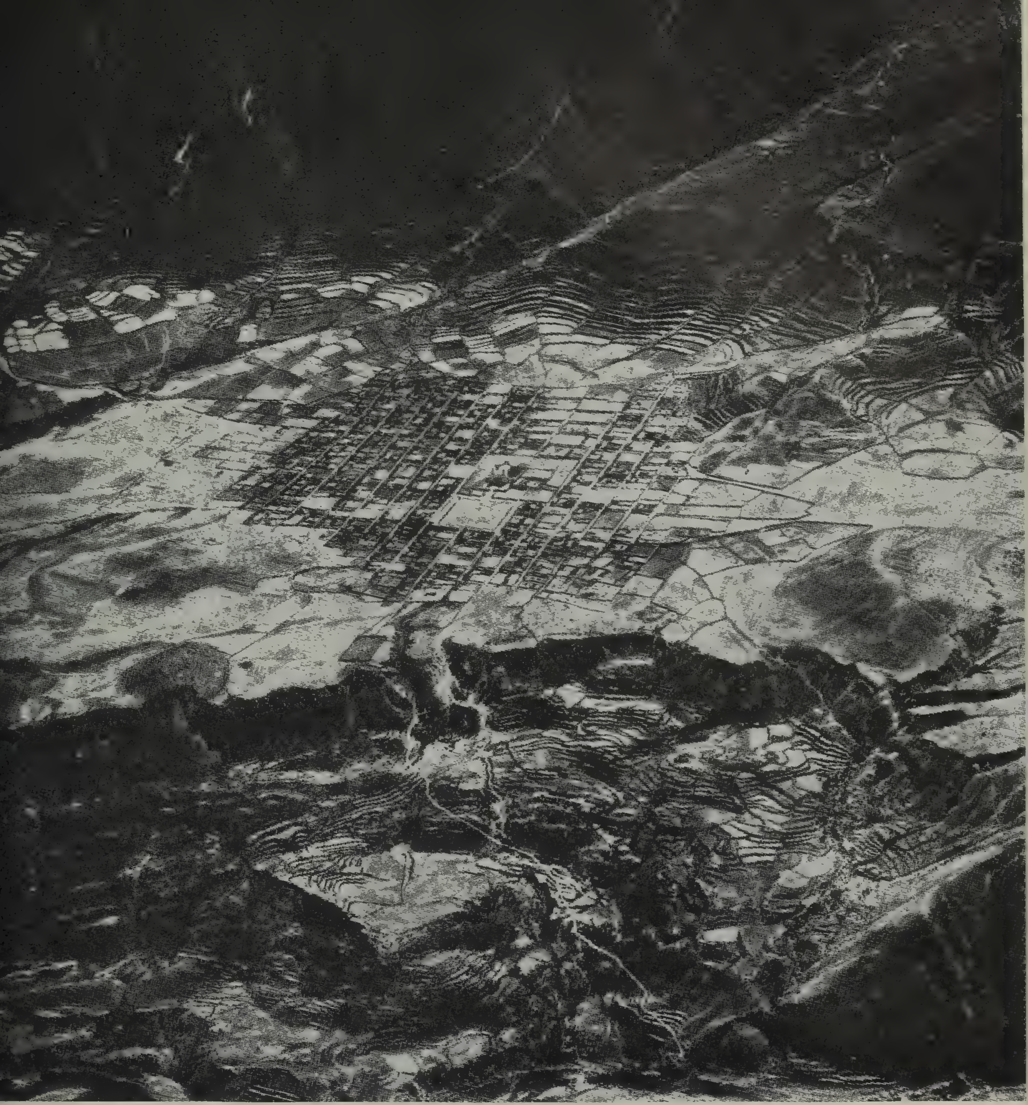
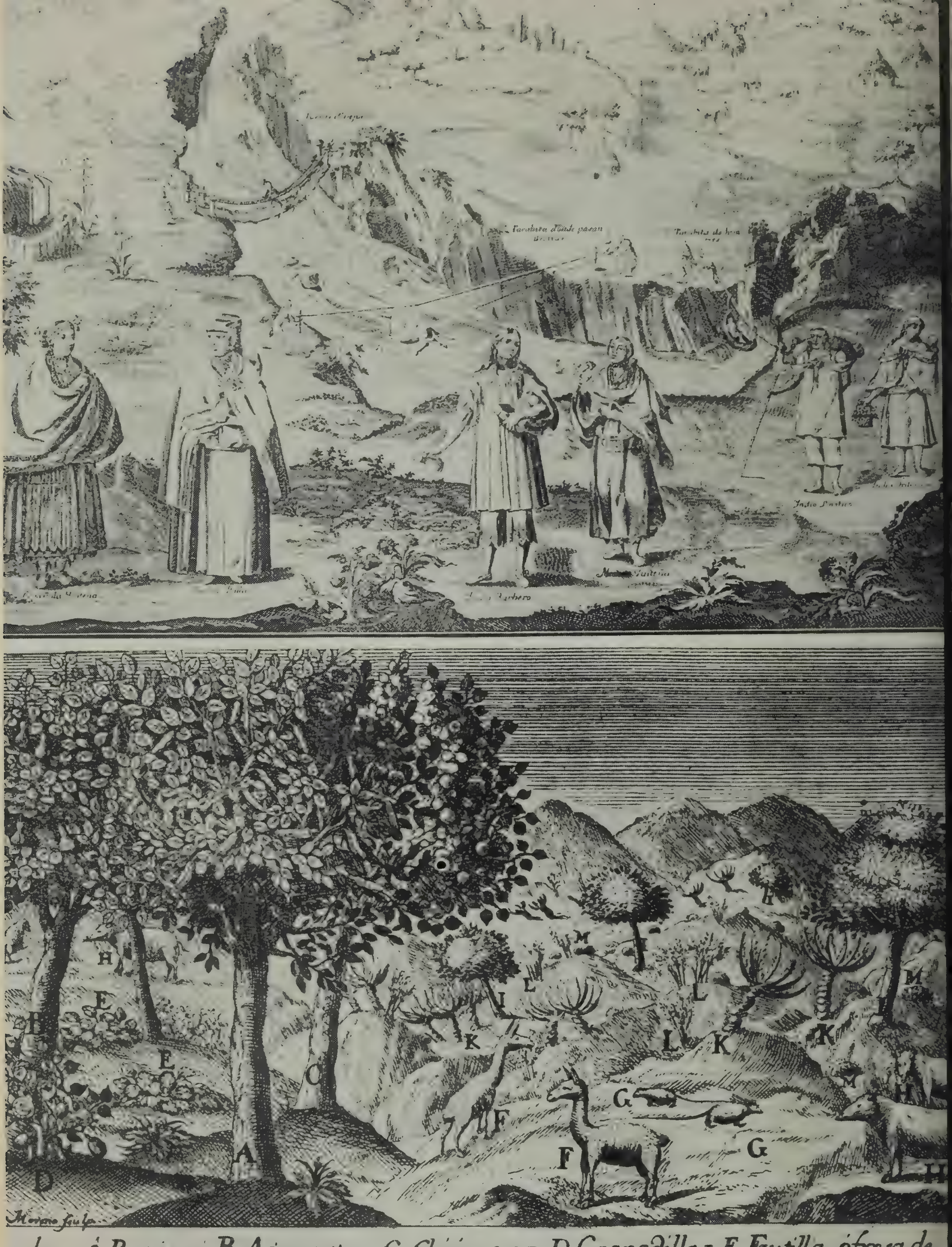


PLATE 85.—**Pinchollo in the Colca River valley, Perú.** The terraces of the inner valley, which extend down to the river's edge, are in the foreground. Above the town, which is on the alluvial fill of the valley floor, are other terraces. (After Johnson, 1930, fig. 26.)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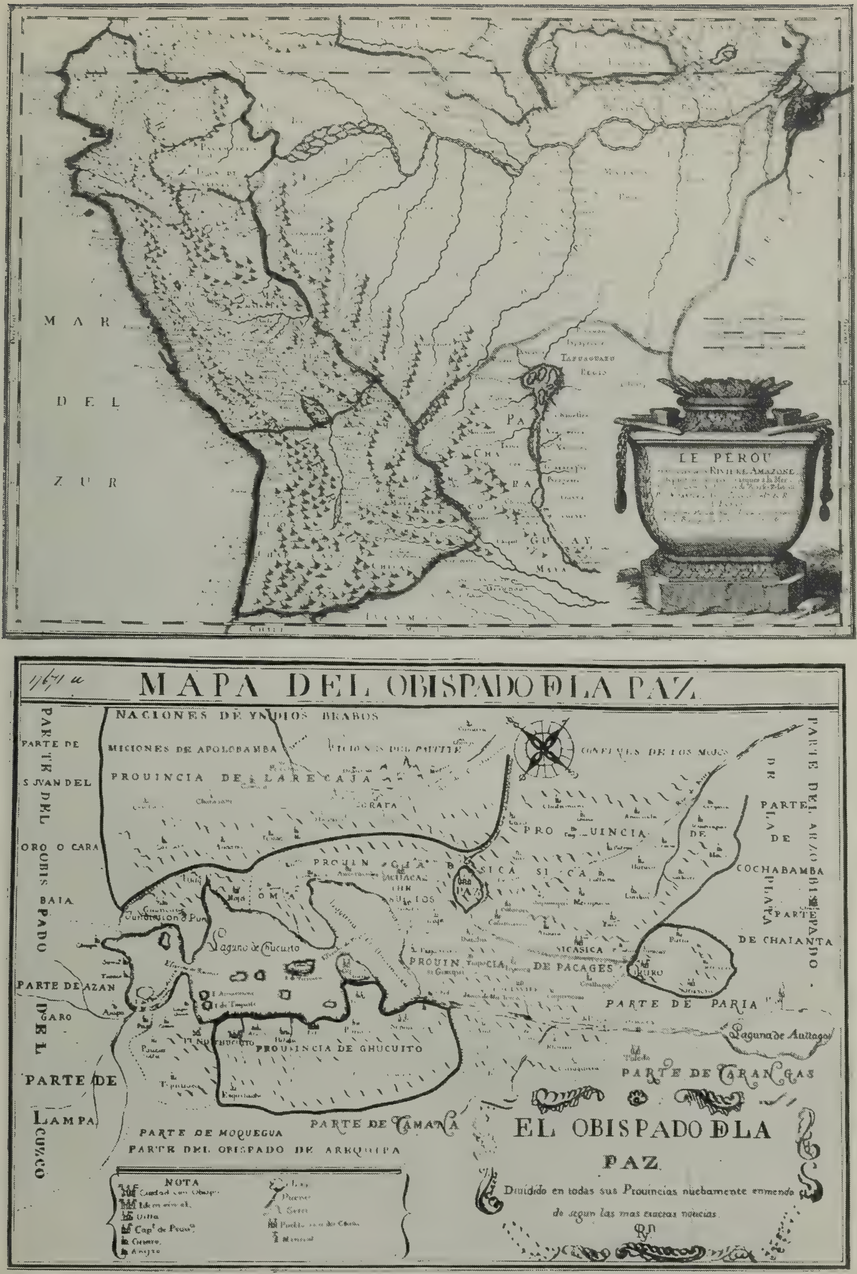
ma = G.Muca muca = H.Danta ó gran Vestia = I.Quinual = K.Achupalla = L.Palo de
M.Puc-huchu =

Plate 86.—**Andean Highland scenes.** *Top:* Social types of the 18th century. *Bottom:* Flora and fauna. (After Jorge Juan and Antonio Ulloa, 1748, opposite p. 378 and p. 405.)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NACIONES DE YNDIOS BRABOS
MICIONES DE APOLOBAMBA
PROUINCIA DE LARECAJA
SORATA
PROUINCIA DE SICA SICA
PAZ
OMASUYOS
Laguna de Chucuito
PROUINCIA DE PACAGES
SICASICA
PROUINCIA DE GHUCUITO
ORURO
PARTE DE PARIA
Laguna de Aullagas
PARTE DE CARANGAS
PARTE DE CAMANA
PARTE DE MOQUEGUA
PARTE DEL OBISPADO DE AREQUIPA
PARTE DE S JUAN DEL ORO O CARABAIA
PARTE DEL OBISPADO DEL CUZCO
PARTE DE AZANGARO
PARTE DE LAMPA
PARTE DE LA PLATA
PARTE DE COCHABAMBA
PARTE DE CHAIANTA
PARTE DEL ARZOBISPADO DE LA PLATA
CONFINES DE LOS MOXOS
NOTA
EL OBISPADO D LA PAZ
Diuidido en todas sus Prouincias nuebamente enmendado segun las mas exactas noticias

Plate 87.—**Seventeenth- and eighteenth-century maps of Perú and Bolivia.** *Top:* Audiencia divisions of 1657. (After Sanson, 1657.) *Bottom:* The Bishopric of La Paz, 18th century. (From Juicio de Limites entre Perú y Bolivia, 1906.)

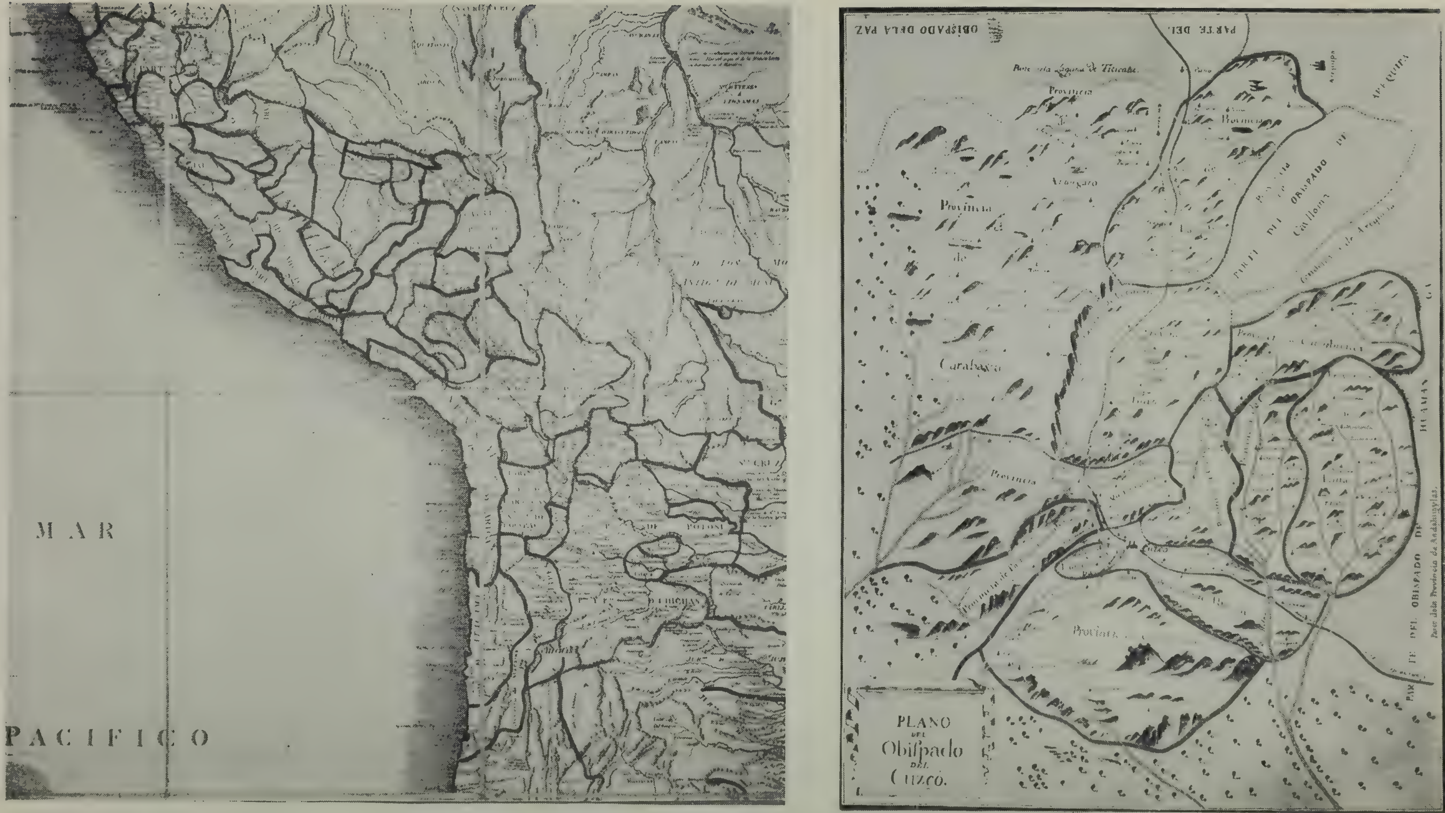
MAR
PACIFICO
OBISPADO DELA PAZ
PARTE DEL
AREQUIPA
Provincia
Carabaya
PARTE DEL OBISPADO DE
PLANO
DEL
Obispado
DEL
Cuzco.

PLATE 88.—**Eighteenth-century maps of the Perú-Bolivia-North Chile region.** *Left:* The Partidos and Provincias of the Audiencias of Lima and Charcas, 1775. (After Cruz Cano y Olmedilla, 1775.) *Right:* The Bishopric of Cuzco, 1781. (From Juicio de Limites entre Perú y Bolivia, 1906.)

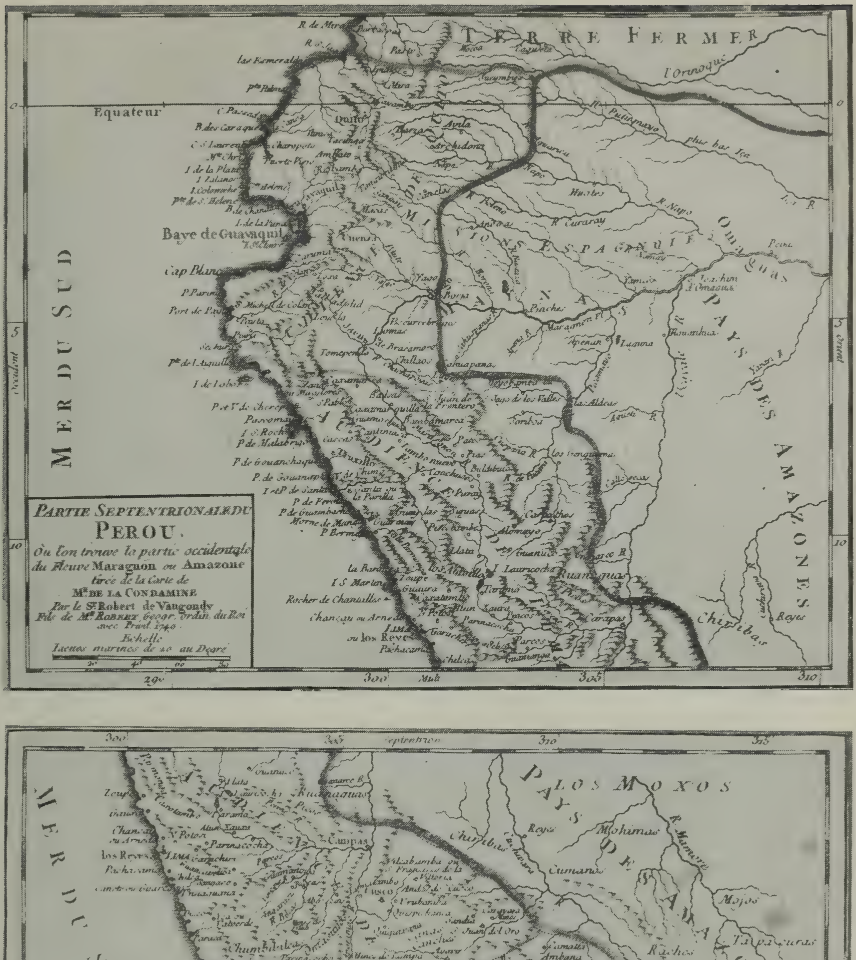
TERRE FERME
l'Orinoque
Equateur
Quito
Baye de Guayaquil
Cap Blanc
MER DU SUD
MISSIONS ESPAGNOLES
PAYS DES AMAZONES
Omaguas
Chiribas
PARTIE SEPTENTRIONALE DU PEROU,
Ou l'on trouve la partie occidentale du Fleuve Maragnon ou Amazone
tirée de la Carte de Mr. DE LA CONDAMINE
Par le Sr. Robert de Vaugondy
Fils de Mr. Robert Geogr. ordin. du Roi avec Privil. 1749
Echelle
Lieues marines de 20 au Degré
290
300
305
310
PAYS DES AMAZONES
LOS MOXOS
MER DU SUD ou PACIFIQUE
Lima
Cusco
Arequipa
Arica
La Paz
Potosi
La Plata
Los Charcas
Chiriguanes
Tropique de Capricorne
Tobas
PARAGUAY
CHACO
PARTIE MERIDIONALE DU PEROU
Par le Sr. Robert de Vaugondy
Fils de Mr. Robert Geogr. ord. du Roi
Avec Privilege
1749
Echelle
Lieues marines ou d'une heure
300
305
310
315

Plate 89.—**Maps of 1749 showing Audiencias of Lima and Charcas.** (After Robert, 1748, pp. 204, 205.)

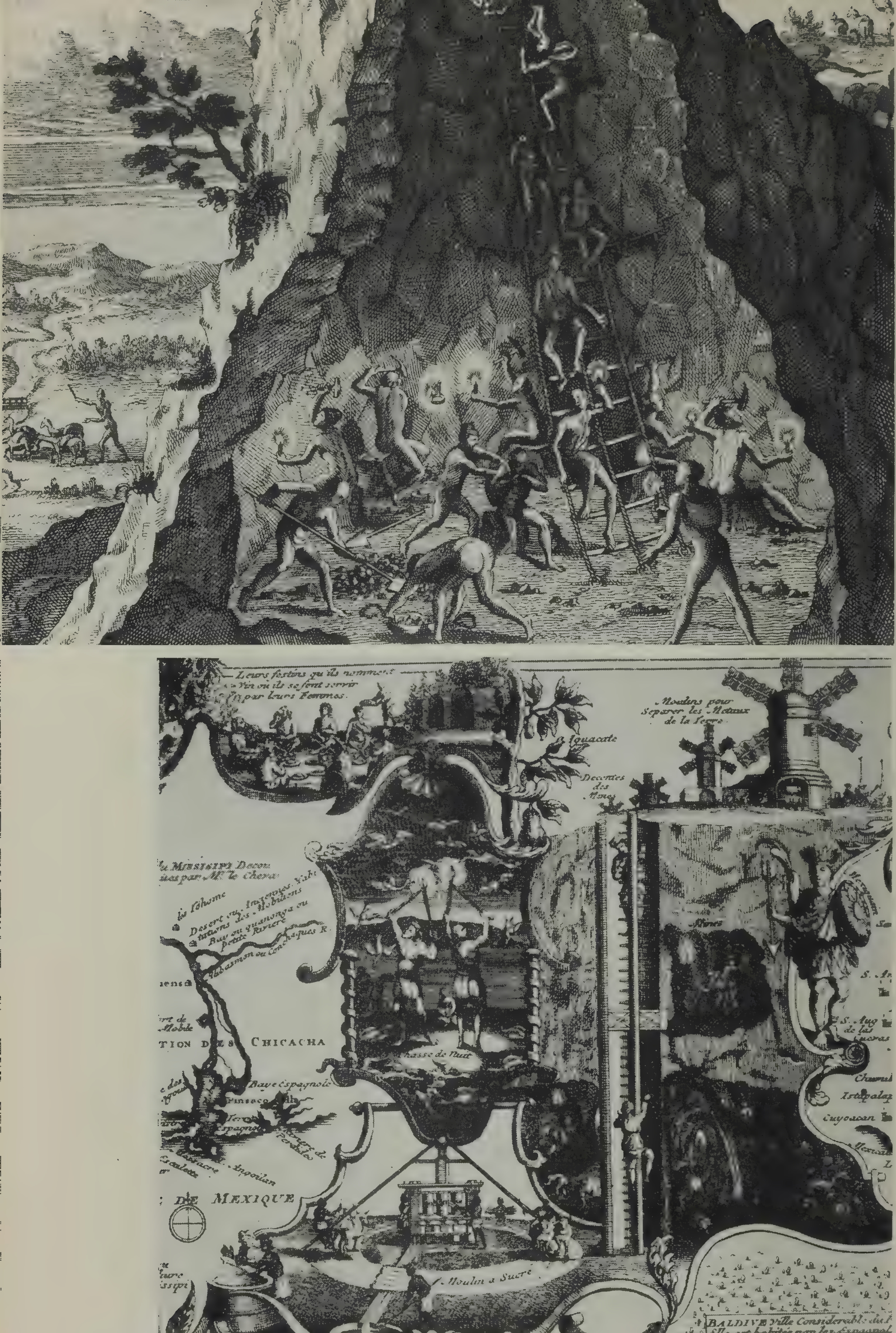
Leurs festins qu'ils nomment
Vin où ils se font servir
par leurs Femmes.
Moulins pour
Separer les Metaux
de la Terre
Aguacate
Decentes
des
Mines
Mines
Chasse de Nuit
CHICACHA
Baye Espagnole
DE MEXIQUE
Moulin a Sucre
Istapalap
Cuyoacan
BALDIVE Ville Considerabl: du

PLATE 90.—**Highland industries in the Colonial Period.** *Top:* Working the silver mines of Potosi. (After Vanderaa, n. d., vol. 32, pl. 42 *b*.) *Bottom:* A sugar mill, a mine shaft, and windmills. (After Chatelain, 1719, vol. 6, map preceding p. 117.)

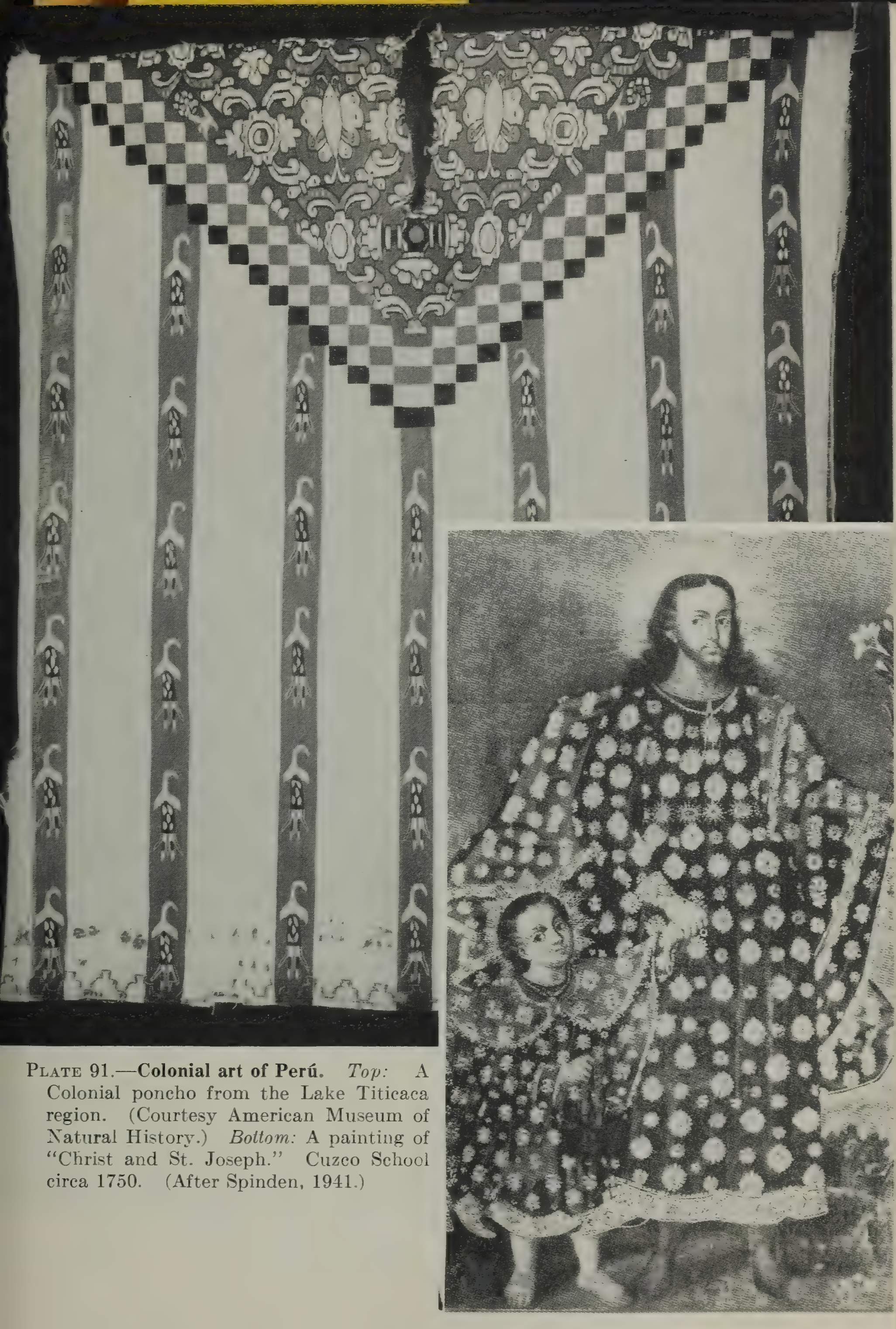

Plate 91.—**Colonial art of Perú.** *Top:* A Colonial poncho from the Lake Titicaca region. (Courtesy American Museum of Natural History.) *Bottom:* A painting of "Christ and St. Joseph." Cuzco School circa 1750. (After Spinden, 1941.)

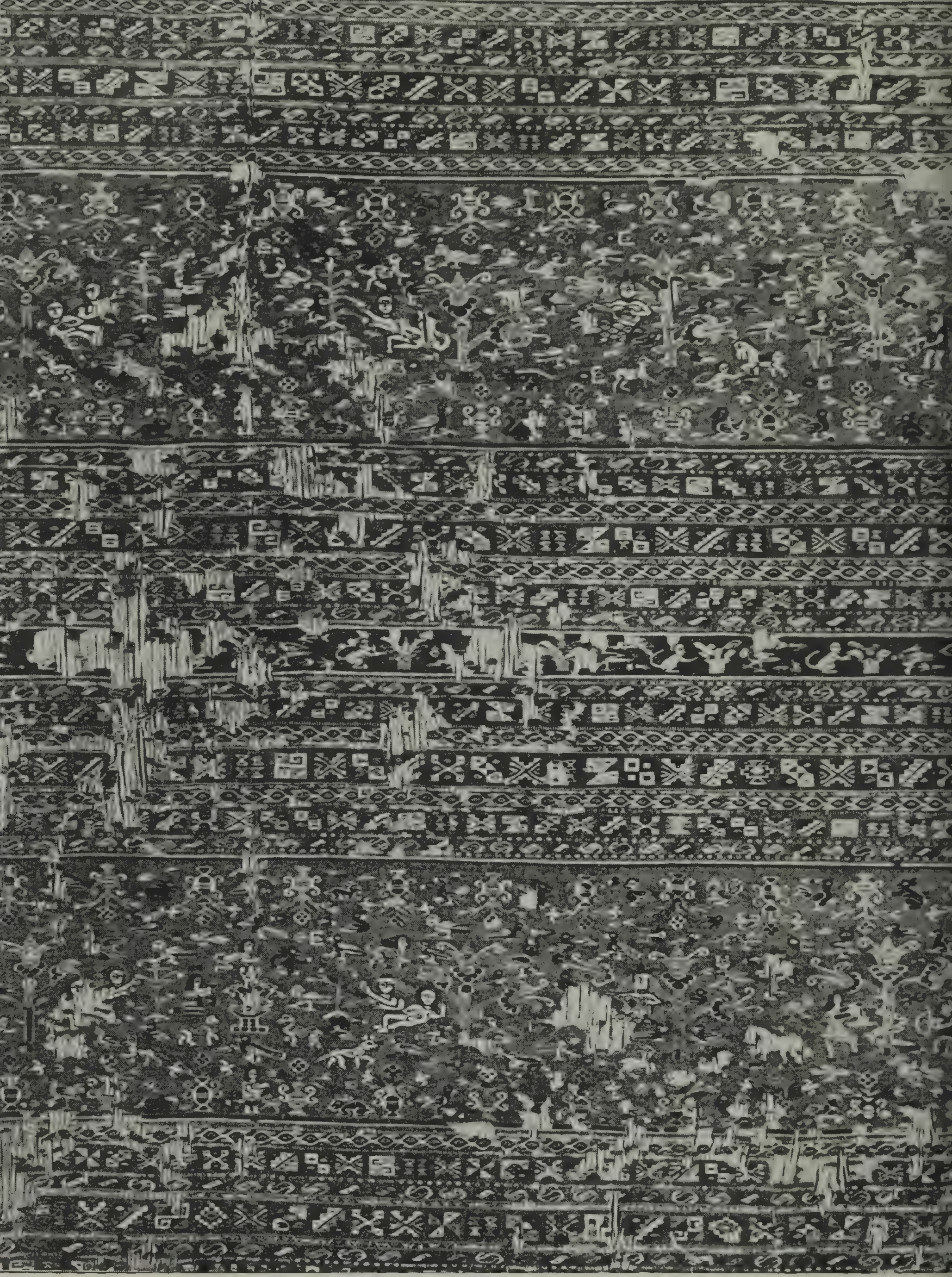

PLATE 92.—**A section of a Colonial textile.** From the Lake Titicaca region of Perú. The designs are combination of *Inca* and European motifs. (Courtesy American Museum of Natural History.)

nearly successful that the Franciscan friars in the city asked leave to depart, and Pizarro's Indian wife, Doña Inés, the daughter of Huayna Capac, attempted to cross the lines to join the besieging Indians. Had the campaign been successful, it was the alleged plan of the Indians at the siege of Lima to reconstitute the *Inca* state and, through the Spanish women remaining in Perú, to create a new generation combining the virtues of the two races (Valverde, 1879, p. 80).

The significance of the rebellion of 1536–37 lies in the fact that it was the final Indian attempt to smother concentrated force with overwhelming mass. Manco conceived the rebellion, it is true, as a total effort in southern Perú, but he employed tactics analogous to those of game-beaters. If he succeeded in taking the lives of some 800 Spaniards during the 16 months of the rebellion, Cuzco held firm, occupied by only 80 horsemen among 190 Spaniards supported by some hundreds of Indian warriors, who withstood the pressure of Manco's effectives, estimated at 180,000 men (Levillier, 1921–26, 2:391–93).

Yet the siege of Cuzco remains a remarkable operation in an extensive campaign, during which Indian strategy, tactics, and material equipment were greatly improved. There was unity of command, there were efficient communications with other forces, and improved weapons were used, such as the weighted slings (aylyo), strung with llama tendons which could not be severed, and designed to entangle the legs of the horses. There were also staked pits, retarding fortifications, and ambitious flanking movements. Manco had at his disposal a certain number of horses and firearms captured from the relieving parties sent out of Lima, as well as seven or eight captive Europeans who served as grooms, armorers, and powdermakers (Herrera, 1726–27, vol. 5, pp. 191, 193).

These improvements, nevertheless, were far outbalanced by the traditional weaknesses of *Inca* warfare. For example, the campaign at Cuzco displays certain remnants of the ritual behavior of ceremonial war (López de Gómara, 1749, p. 120). Manco's great mass attacks were launched periodically at the full moon, when his men were at the mercy of the cavalry counter attacks. At all times his troops were massed so densely that their pikes were of no avail against the horses. Then, at new moon, when the horses would have been at disadvantage in the dark night, the Indians ceased attacking to perform sacrifices to the lunar deity, thus forfeiting the advantage of sustained pressure upon the enemy. This 20-day rhythm of battle was known to the Spaniards, and they exploited it accordingly (Kubler, 1944).

It also became necessary for the Indians periodically to disband large forces which were sent in search of food. Indian needs were vastly greater than those of the small Spanish force, and after the fall of Sacsahuaman it was an easy matter for the Spaniards to gather enough corn at nearby fields (Valverde, 1879, pp. 34, 43). The Indians, on the contrary, had to demobilize huge numbers of men for agricultural labor, and this cumulative drain upon their strength finally contributed to the failure of the rebellion.

Manco commanded a popular army at Cuzco, levied from all available sources. It certainly lacked the professional training of the pre-Conquest *Inca* armies, and in battle its behavior was that of a surging rabble, while in defeat the defection of large contingents was a daily phenomenon. The Spaniards systematically exploited all the weaknesses of such an agrarian militia. They harvested or burned the crops sown with great difficulty by the Indian armies. Prisoners of battle were mutilated, usually by cutting off their right hand (Valverde, 1879, p. 44). In the fourth month of the siege, the Spaniards adopted a devastating practice. The besiegers composed a mass of humanity in which only a fraction was tactically effective. The great remainder consisted of women and children and families of the fighting men. The food and care of the attackers were provided by these camp-followers, and Hernando Pizarro ordered that all women caught in battle be killed (Valverde, 1879, p. 52). The progressive demoralization caused by this practice contributed largely to Manco's withdrawal from Cuzco in February 1537, in the 10th month of the siege.

Finally, a major cause of the failure of the rebellion was Manco's lack of control over the proletariat of the yanaconas distributed throughout Perú. These servants functioned as spies, domestics, providers, and nurses for the Spaniards. Above all, they could mingle freely among the rebels to learn their plans of attack (Pizarro, P., 1921, 1:330). Against such large-scale espionage, Manco had no protection.

In Manco's defense, it should be pointed out that he had no choice but to attack in mass. He had had some experience with Spanish weapons and tactics during the campaign against Quizquiz, in 1535, where he served as an Indian auxiliary. When planning his own campaign against the Spaniards, however, Manco faced the dilemma of choosing either to use untrained masses of men or to approximate European tactics without the proper equipment. That he decided upon the mass attack was reasonable and fitting.

The rebellions of the 18th century.—The last century of the Colonial era was punctuated by Indian rebellions, occurring at frequent intervals throughout Perú. The normal form was that of local riots, occasionally involving whole provinces, in which the animosity of the Indians was directed against their corregidores. Indian rebellion was usually conducted within a framework of loyalty to Church and Crown; these institutions were rarely questioned, and the causes of social oppression were identified by the Indians with the minor resident officials. None of the rebellions achieved pan-Peruvian proportions, not even the great revolt of the 1780's, under the brief leadership of José Gabriel Tupac Amaru and his associates.

The earliest riot of which we have any record occurred in Lima during the government of Viceroy Castellar (1674–78). It differed considerably from the rural and provincial revolts of the following century, in that it developed among the atypical Indians of the metropolitan area.

In 1730, in the Province of Cochabamba, where the greatest number of Mestizos in the Viceroyalty of Perú were resident (Manso, 1859, p. 194), another tumult broke forth when the regional inspection attempted to take the census (Armendariz, 1736, *in* Memorias, 1859, 3:280–87). At about the same time, in Asángaro, Carabaya, Cotabamba, and Castrovirreina, the exasperated Indians murdered several corregidores. In Cotabamba, the disturbance was precipitated when the corregidor made the mistake of attempting to collect tribute payments during a Church festival. In 1734, at Andahuailas, another revolt against a corregidor was recorded; in this affair, the clergy evidently opposed the official (García y Sanz, 1876, pp. 88–89).

The most ambitious and extensive outbreak prior to the great rebellion of 1780 was the so-called Tarma Revolt, which erupted in 1742. Its history will be recapitulated in the Handbook, volume 3.

Juan Santos himself disappeared from Spanish view after 1750, but it is to be noted that with him, as with the later leader, José Gabriel Tupac Amaru, a steadfast adherence to the Catholic Church governed his actions. Also like the rebellion of 1780 is the fact that the revolt of 1742 developed eastward from the Montaña, rather than west, toward the administrative center of life in Perú.

In the west, nevertheless, may be noted the so-called Revolt of Huarochiri. It began in 1750 in Lima with a conspiracy among urban Indians. The conspirators were executed, but the revolt soon broke out again in Huarochiri Province, where the corregidor's lieutenant and his family were murdered. The responsible Indians then wrote letters inciting the rest of the province to rebellion. An Indian militia was formed and commanders selected. The roads were blocked and bridges broken. Soon, however, Indian resistance was crushed by a Spanish force of 400 men. It was discovered that one of the ringleaders had made a plan of Lima and laid out the strategy for invading the capital; another of the leaders had been to the Montaña to confer with Juan Santos, and had traveled Perú in disguise as a merchant, arousing the curacas (Manso, 1859, pp. 94–99).

The revolt of Tupac Amaru.—The history of the revolt of Tupac Amaru is intricate and obscure; to clarify its course, the reader may refer to the following list of its episodes and their general calendar (pls. 87, 88):

1. The Chayanta Rebellion (August 1779 to May 1781).
2. José Gabriel Tupac Amaru and the Siege of Cuzco (November 1780 to May 1781).
3. Julián Apasa and the First Siege of La Paz (March to June 1781).
4. Andrés Tupac Amaru and the Second Siege of La Paz (August to October 1781).
5. Final Episodes: Miguel Bastidas, Felipe Velasco Tupac Amaru.

These various episodes, it should be emphasized, were confined to the southern Highlands of Perú. Their relation to one another is not that of an organized rebellion conducted simultaneously in various theaters under unified direction. On the contrary, as one episode waned, another matured to take its place, and the rebel groups migrated accordingly. Leadership was discrete and confused, but it is likely that fighting Indians from certain provinces, such as Pacajes or Chayanta, participated in nearly all the major episodes.

The Chayanta rebellion unfolded in the Viceroyalty of Buenos Aires, but its participants were *Quechua* and *Aymara* Indians resisting the extortions of corregidores. La Paz was briefly besieged in February 1781, until the arrival of troops from Buenos Aires (Segurola, 1881, p. 375).

By this time, the revolt of Tupac Amaru was well underway; Cuzco had been besieged in January 1781, and there is no doubt that the rebels of Chayanta were in communication with their colleagues to the northwest. (Angelis, 1836–37, p. 223; see also Segurola, 1881, pp. 375, 379.) In general, the revolt of Tupac Amaru, insofar as it was directly under his control, suffered from inadequate force and organization. At no time did he command the full resources of more than five provinces: Lampa, Asángaro, Carabaya, Chucuito, and Paucarcolla. Neighboring *Aymara* provinces, such as Larecaxa, Omasuyos, and Pacajes, never unconditionally supported his insurrection. In public declarations, Tupac Amaru phrased the aims of the rebellion in the language of administrative reform and did not formally offer his followers the promise of an independent Peruvian Indian state. Others did so in his name after his death, such as the illiterate Julián Apasa; they, however, were *Aymara*-speaking, and far less Hispanicized than the descendant of the *Inca* rulers.

Tupac Amaru's communications were poor. He was unable to make effective use both of the Chayanta Rebellion and of the *Aymara* insurrection about La Paz. His rebellion was constructed only within the weak pattern of the hereditary local curacaships; it was sustained by no other Indian administrative network, for with the institution of the corregidores, the Indians themselves had long since been occluded from the higher processes of Colonial government. (Cf. p. 347.) Although the rebellion of the 1780's takes its name from the episode staged by the idealizing and romantic Tupac Amaru, its most sustained and substantial achievement occurred in the long siege of La Paz after his execution. (Fig. 40.) Thus, in 1781, three distinct and separate insurrections were in progress, connected only by the most tenuous relations: the Chayanta rebellion, the rebellion of Tupac Amaru, and the siege of La Paz under the command of Julián Apasa. That none of them succeeded may be attributed in large part to the fact that they remained separate and unrelated.

The tactical conduct of the siege of La Paz reveals remarkable variety and inventiveness, vitiated, however, by the lack of discipline and training among the peasant levies. Early in the campaign, the Indians were armed only with stones, and they attacked most heavily during rainy weather, in the justifiable hope that the European firearms would be made ineffective. At this stage, Indian morale was good; it is reported that the attackers were most solicitous to conceal and bury their dead; the few prisoners preferred suicide to captivity (Segurola, 1881, pp. 387–88). Soon the Indians managed to spread the siege by burning surrounding communities, impounding all livestock, and by investing the roads over which reinforcements might come. Firearms were procured and aimed by snipers sheltered within the ruins of the burned houses at the city's edges. Captive Spaniards were made to serve the newly acquired artillery, and the rebel effectives were augmented by Mestizo deserters from the city. By April the attackers could circulate unseen all about the city, using the burnt-out shells of houses. Attacks in force were delivered by files of foot soldiers moving behind the cover of horses and pack animals (Segurola, 1881, pp. 390–96). Their armament then included cannon, mortars, and muskets. The cannon were used to fire hand grenades; explosive sling missiles, rockets, and incendiary arrows wrought much damage. The artillery, however, did little harm, for the fire of the four mortars was laid by Mariano Murillo, a captive and naturally uncooperative loyalist, whose arms Julián Apasa later had struck off (Segurola, 1881, pp. 405, 412) in punishment for attempting to communicate with the city.

Meanwhile, the Indian host had encamped upon the plateau above La Paz, in what has been described as "another city," with a church, many dwellings, a prison, and other buildings, in a manner suggesting the practice of the great *Inca* sieges (Bram, 1941, p. 85; Segurola, 1881, p. 421). The camp had 24 cabildos, each with its gallows and whipping post. A great tent was called the Palacio; in it lived Julián Apasa with his young chola wife, a government of four "oidores," various ambassadors, two captive priests, and Bonifacio Chuquimamani, the cholo secretary (Borda, 1881, p. 440). The "oidores" administered the sale of coca and the estates of the deceased; they were also the treasurers and the supply officers for the army (Borda, 1881, p 441). The ritual life of the camp was punctuated by frequent performances of great wheel dances (bailes de rueda). It is striking to note that, as in the revolt of Manco Capac and in the siege of Cuzco in 1536–37, the dances were performed every 20 days. During them, military activities were suspended.

The collapse of the first siege of La Paz late in June 1781 happened

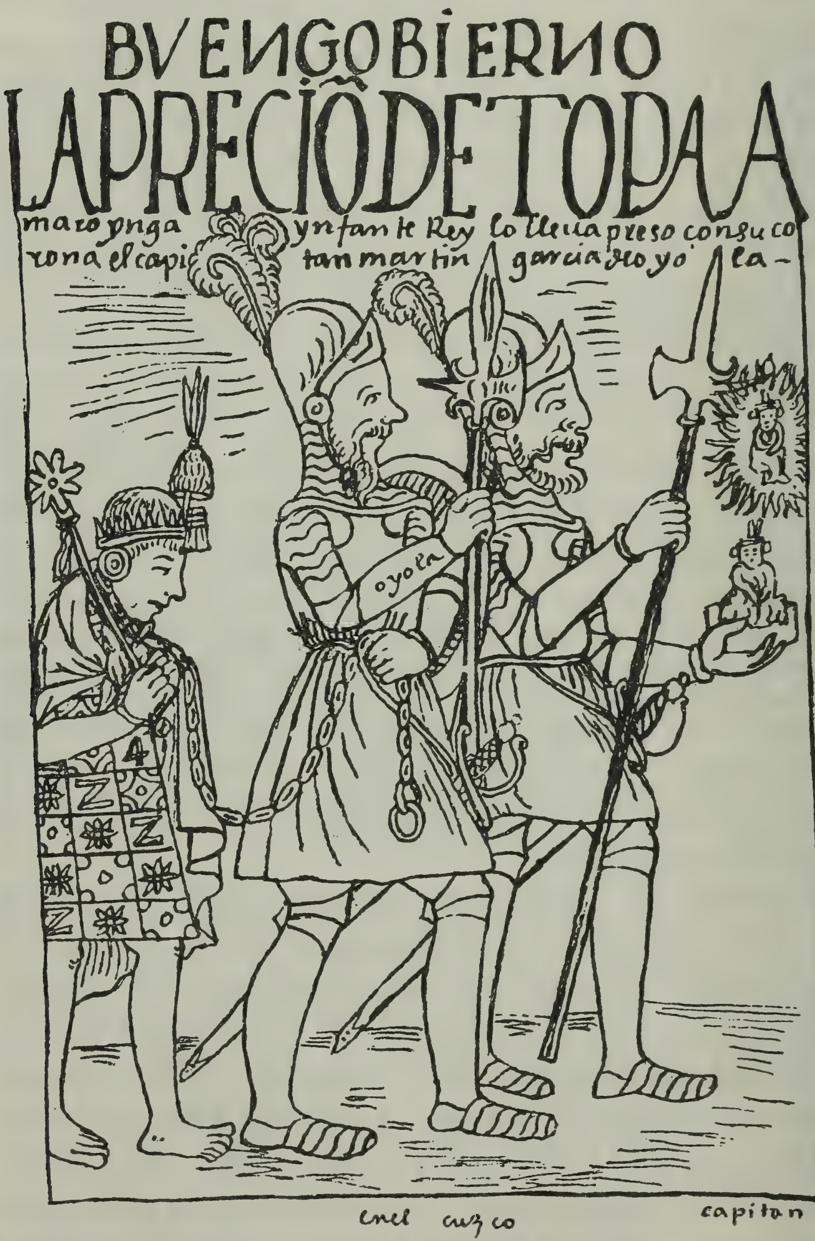
BVENGOBIERNO
LAPRECIÕDETOPAA
maro ynga ynfante Rey lo lleua preso consu co
rona el capi tan martin garcia ño yo la –
oyola
4
en el cuzco
capitan

FIGURE 40.—The capture of Tupac Amaru I. (After Guaman Poma, 1936, p. 449.)

less because of local conditions at the site of the siege than because of Spanish depredations among the supporting provinces. The crushing of the revolt of Tupac Amaru did not become generally known about La Paz until September (Segurola, 1881, p. 481), but the consequent demoralization of the rebel provinces bore results far earlier.

The second unsuccessful siege of La Paz began on August 4, under the direction of Andrés Tupac Amaru, who styled himself the son and heir of José Gabriel Tupac Amaru. Precisely who he was and where he came from have not been determined. The new leader, in order to legitimize his position, invented and circulated a strange account of the rebellion. According to Andrés, in a forged letter purporting to be from José Gabriel and dated July 1 at Tinta, he had been bequeathed all his "father's" powers. These powers, it was claimed, derived immediately and legitimately from Charles III. Andrés had little to do with the actual conduct of the second siege, but its military leaders acknowledged his authority. As in the first siege, the Indians attempted the ruse of impersonating Spanish soldiers. When this failed, an effort was made to flood the city. By October 12, the headwaters of the river had been dammed; a great head of water collected, and when the dam was suddenly removed, a torrent rolled down upon the Spaniards. The device was common in mining enterprises; at La Paz, however, it was unsuccessful (Segurola, 1881, pp. 485, 494). Another Indian stratagem was for venders to offer food to the starved Spaniards at the edge of the city, and to take captive those who came forth (Segurola, 1881, p. 488).

Final episode.—Over the last episodes of the great rebellion, the spirit of José Gabriel seemed constantly to hover. His relatives, real and fictitious, dominated the scene. Finally, in May 1783, the flames of the revolt flickered once again in Huarochiri Province. An individual styling himself Felipe Velasco Tupac Inca Yupanqui, invoked his "cousin," José Gabriel, in calling the Indians of the corregimiento of Parinacochas to his banner. They were assured that José Gabriel was still alive, seated upon the imperial throne in the realm of the Gran Paitití. During the month of June Spaniards were imprisoned, the roads and bridges leading into the province from Lima were cut, and a general Peruvian rebellion was planned for August 29. The conspirators, however, were apprehended and executed before its eruption (Angelis, 1836–37, p.183).

For present purposes, the most significant aspect of the Indian rebellion is its striking lack of formal indigenous cultural content. Had the rebellion been successful, and had it resulted in the creation of an independent Peruvian Indian state, that commonwealth would have assumed and continued the institutional culture of the Colonial era. Such a prospect would have been inconceivable or repugnant to the Neo-*Inca* in Vilcabamba; conversely, the cultural autonomy of the

Quechua in Vilcabamba in the 16th century would have been unsatisfactory to the Christianized and Hispanicized Indians of the late 18th century. At all points the late Colonial Indian philosophy of rebellion found its limits within the horizons of Spanish institutional culture. In essence, the Indians wished to capture Spanish institutions, not destroy or displace them by others.

A quantitative measure for the processes of Colonial acculturation is suggested by the similarities and differences between the rebellions of Manco Inca and José Gabrial Tupac Amaru. To both leaders a relatively stable Andean community pattern was available for manipulation. For Tupac Amaru, however, formal government

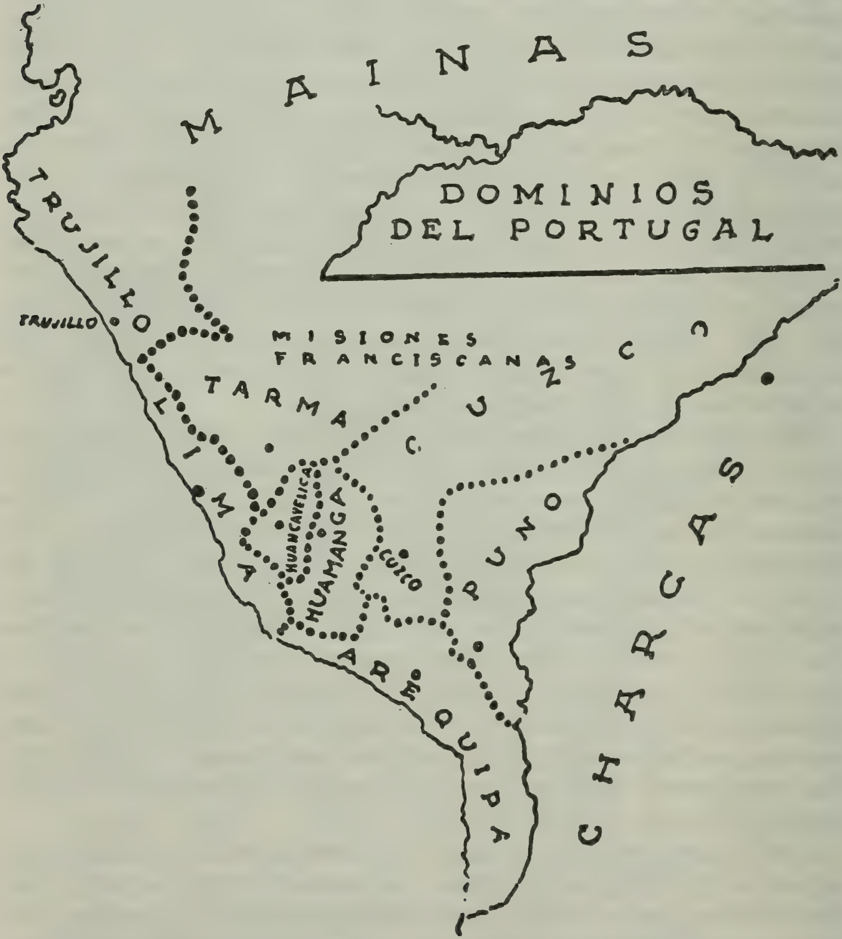
MAINAS
DOMINIOS DEL PORTUGAL
TRUJILLO
TRUJILLO
MISIONES FRANCISCANAS
TARMA
CUZCO
LIMA
HUANCAVELICA
HUAMANGA
CUZCO
PUNO
AREQUIPA
CHARCAS

FIGURE 41.—Map of Perú, showing Intendencies in the 18th century. (After Wilgus, 1932. Reproduced with permission from Breve Historia de América, by Carlos Pereyra, 1930.)

and established religion were to remain Hispanic and Catholic. Hence, most changes within the basic Andean community pattern must be treated as functions of the spread of formal Hispanic culture; the constant and unchanging traits, accordingly, are those which never came into direct conflict with the Church or with Colonial government.

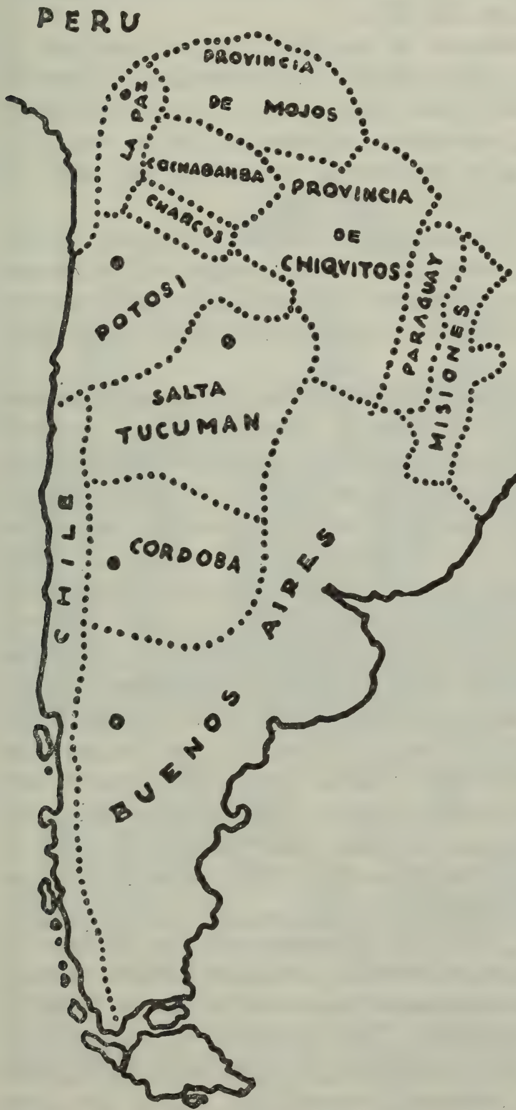
PERU
PROVINCIA DE MOJOS
BRASIL
LA PAZ
COCHABAMBA
CHARCAS
PROVINCIA DE CHIQVITOS
POTOSI
PARAGUAY
MISIONES
SALTA
TUCUMAN
CHILE
CORDOBA
BUENOS AIRES

Figure 42.—Map of La Plata, showing Intendencies in the 18th century. (After Wilgus, 1932. Reproduced with permission from Breve Historia de América, by Carlos Pereyra, 1930.)

ESTHETIC AND RECREATIONAL ACTIVITIES

Music.—Harcourt's incontrovertible observation that Andean musical folklore is the richest and most original in America (Harcourt, 1925, p. 207) postulates an intricate Colonial development from indigenous sources. Its character derives from the blending of 16th-century European polyphony with a presumptive native pentatonic scale (Harcourt, 1925, pp. 132–53).

Stringed instruments, unknown in antiquity, were introduced in the 16th century; the harp, with a diatonic scale through five octaves, and the charango, a mandolin, are used by the *Quechua* (Harcourt, 1925, pp. 79, 85). Among percussion instruments, Indian use of the small drum called tinya as a tambourine is perhaps the result of Catalan influence (Harcourt, 1925, p. 18).

The rich repertory of *Quechua* songs contains religious chants, funeral lamentations, love songs, vocal accompaniments for choreographic and instrumental performance, farewell songs, and pastoral songs. Noteworthy is the absence of cradle and nursing songs (Harcourt, 1925, p. 168).

Dances.—An intimate union between Christian liturgy and *Quechua* dancing may be noted in a drawing by Guaman Poma, executed early in the 17th century, showing masked Indian boys performing a duelling dance before the church altar (Poma de Ayala, 1936, p. 783). About 1650, Church festivals were the occasion for native dances (Cobo, 1890–95, vol. 4). According to Frézier (1716, p. 249), the death of Atahuallpa was enacted in dancing on the day of the Nativity of the Virgin (September 8) by Indians in bird costumes, bearing figures of the Sun and Moon. In 1905 an "Inca" dance was still performed in Tarma, with Indians impersonating Huascar and Juan Pizarro, as well as princesses and a sorcerer (Harcourt, 1925, pp. 105–07). An important Colonial development was the performance of dances choreographically related to industrial activities; Harcourt reports a wool-cutter's dance at Ayacucho in which the workmen brandished the shears of their trade (Harcourt, 1925, p. 120). Many other dances of this class have been noted in the Arequipa region (Mejía Xesspe, 1923).

Leisure.—The inability and the reluctance of the Indians to perform the required amounts of work incited the colonists to punitive measures, which further increased Indian unwillingness, bringing in turn even sterner punishments. The Spaniards do not seem to have comprehended that, for the Indian, no work was worth doing which was not infused by ceremonial symbolism. Under the *Inca*, the tributary gave labor for the fields of the Sun and to the public works of the Emperor, and in working for his own sustenance, he worked for his community (Polo de Ondegardo, 1873, p. 161). All work was punctuated by ritual and festival occasions; work itself was ceremonially performed.

In Christian life, work and worship were separate concepts. The day of rest evoked no response from the Indian whose understanding of leisure was in terms of ceremonial exercises. Under Christian

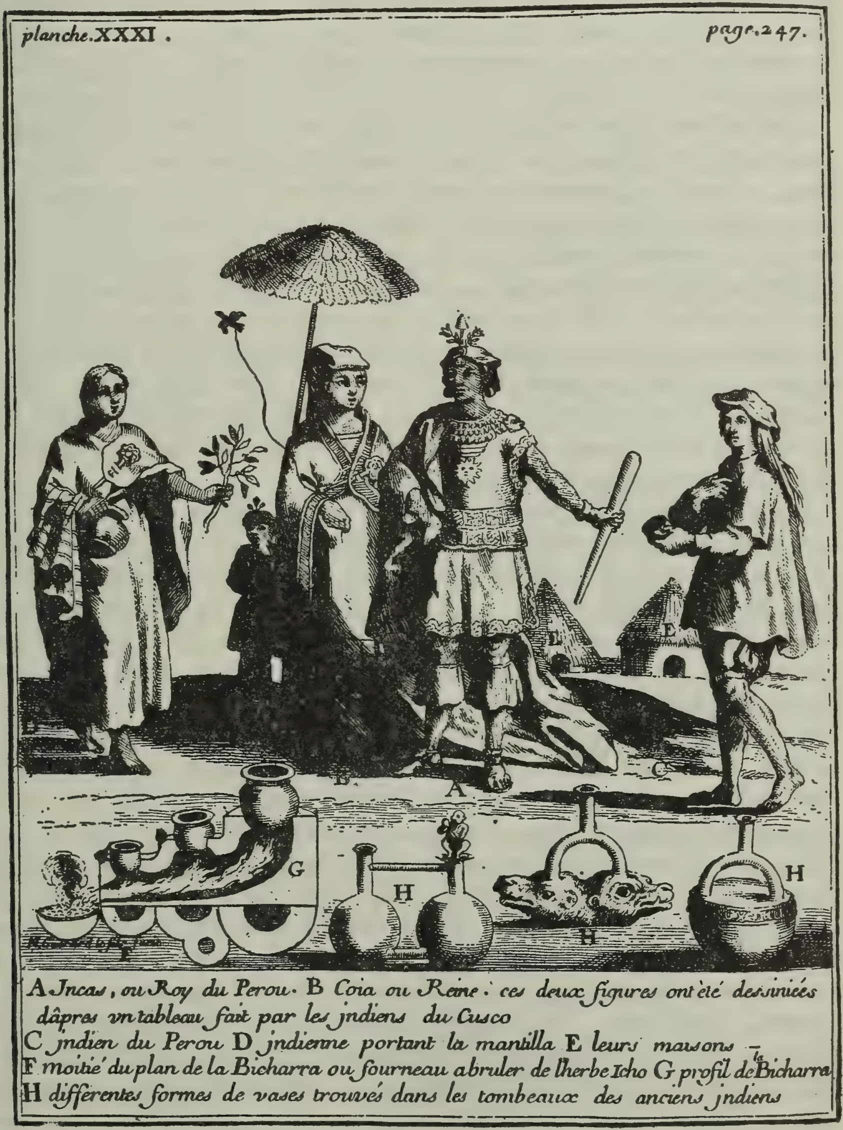
planche.XXXI.
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A
B
C
D
E
E
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H
H
H
A Jncas, ou Roy du Perou. B Coia ou Reine: ces deux figures ont èté dessiniées dâpres vn tableau fait par les jndiens du Cusco
C jndien du Perou D jndienne portant la mantilla E leurs maisons
F moitié du plan de la Bicharra ou fourneau abruler de lherbe Icho G profil de la Bicharra
H differentes formes de vases trouvés dans les tombeaux des anciens jndiens

Figure 43.—An early 18th-century drawing of the *Incas*. *A*, The Emperor; *B*, the Coya or Queen; *C*, Indian; *D*, Indian carrying a cape or mantilla; *E*, houses; *F*, *G*, plan and cross section of furnace for cooking herbs; *H*, vessels found in ancient tombs. (After Frézier, 1716, opp. p. 247.)

direction, the tributary was expected to do unadorned work for 6 days, divorced from all forms of ritual behavior. His daily devotions were a separate category, and labor, from being a form of piety, was degraded into physical toil, without spiritual compensation.

For the great reformer, Viceroy Toledo, this problem of "psychological unemployment" never presented itself. To the administrator, the real problem was quite different, and it had a double aspect: to educate the Indians to systematic habits of work, and to regulate the extravagant demands made upon their labor by private parties.

Alcoholism.—One result of these solutions to the problem of leisure was vastly to increase the Indian consumption of alcohol. Drunkenness, induced by consuming large quantities of chicha or sora, was more common than in antiquity, when it had been restricted to ceremonial occasions (Santillán, 1879, pp. 77–79). In the 19th century, Indian alcoholism presented a serious social problem, since government revenue had in large part to be raised from taxes on alcohol. As Belaúnde points out (1932, p. 98 ff.), one-seventh of all government income was derived between 1869 and 1903 from this source. But Belaúnde, in moralizing upon Indian alcoholic degradation, takes no account of the increase in population, or of the gradual exploitation of alcoholic consumption by tax collectors.

Coca.—In his daily life the *Quechua* had access to a luxury which had been denied him under the *Inca* rule: coca. In antiquity, the use of coca was subject to strict regulations and was commonly enjoyed only by the ruling caste. In the Colonial era its cultivation was commercially encouraged, and the narcotic was used by Indians throughout Venezuela, New Granada, Quito, and Perú. It was grown chiefly in the Andean area between Huamanga and La Plata. The mastication of the leaves allayed thirst and hunger; within certain limits the herb supplied dietary deficiencies; its cultivation was arduous only where the first breaking of the ground was concerned; the industry was a business for some 2,000 Spaniards in the 16th century; and the leaves conveniently were circulated as currency among the Indians themselves. Matienzo declared that without coca there could be no Perú. When abused, however, the use of coca induced pellagralike infections of the mucous membranes. It was also blamed for making women barren, and for increasing the industrial death rate. In 1555–61 Viceroy Cañete attempted to suppress its cultivation because of the association of coca with idolatry,[4] and because the expanding industry was drawing labor away from the mines. These legislative efforts soon had to be abandoned, because of the economic role played by coca, and Indian resistance to its return to the status of a restricted commodity, as under *Inca* rule. (Matienzo, 1910, chs. 44–45; Santillán, 1879, pp. 115–16; Anonymous, 1889, pp. 214–16; Falcón, 1867, p. 484; Quiroga, 1922, p. 100 ff.)

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[4] The herb was frequently used medicinally by Europeans against colds and dental decay; in the Bishopric of Quito, however, the association of coca with idolatry led to its proscription. Europeans using it were liable to excommunication (Peña, 1698, pp. 570–71).

RELIGION

The 16th-century conversions.—The Jesuit Blas Valera, writing about 1591, left a succinct account of the nature of 16th-century efforts to Christianize the *Quechua* populations of Perú (1879, pp. 207–15). In the first months after the Conquest the Indians were forcefully herded into the Christian family, being given baptism without catechism or doctrinal instruction of any kind. Such mass baptisms were practiced in northern Perú, at Cajamarca, and among the Coastal tribes as far south as Pachacamac. Not only were these early conversions impermanent, but the bad example of the first generation of colonists brought about the social and moral degradation of Indians living in proximity to the Europeans.

On the encomiendas, the grantee was obliged to maintain a resident clergy for religious instruction of the repartimiento Indians. Since the living of the curate or friar in question was collected in part from the encomendero himself, the religious instruction often served the encomendero's wishes, favoring his techniques of exploitation (Toledo, 1867, p. 4). In certain cases, the encomendero even appointed the curate to the position of major-domo, putting him in the position of extortioner (Anonymous, 1889, p. 201). The priest enforced his exactions by appointing officers of justice, dispensing judgment in civil matters, and maintaining prisons (Lorente, 1867–72, 1:3–4). For such services the resident curate was paid not only a substantial cash salary, amounting to as much as 300 or 400 pesos annually, but his extensive food needs were provided by the Indians of the repartimiento (Vega, 1896, pp. 109–10).

In general, then, the Indians were reluctant to enter Christian life during the 16th century. Their behavior with regard to conversion impressed the Spaniards of the generation of the 1560's as obstinate, secretive, and hypocritical. The Indians retorted that Christian doctrine was imposed by force rather than by love, that the Spaniards had never seriously attempted to remove linguistic obstacles, and that evil Christian works had corrupted the Christian faith in Perú. In the eyes of the Indians, as we may gather from the remarkable "Coloquios de la Verdad," by Pedro de Quiroga, written about 1563, the Christian ministers were corrupt and greedy. The doctrine itself had often been degraded through being taught by Negroes and yanaconas. From the Indian point of view, the missionaries had failed in the following objectives: (*a*) To convince the Indian of the existence of the true God; (*b*) to demonstrate that the universe was created by the one and only God; (*c*) to explain the mystery of the

Redemption; and (*d*) to induce the Indians by good example, and thus to lead them to understand and participate in the Sacraments (Quiroga, 1922, p. 115 ff.).

Sixty years later, Father Arriaga, writing about 1620, still faced the same difficulties as had his 16th-century predecessors. The catechism which he proposed as essential for the instruction of the Indians yields an index to the persistence and vitality of Indian religion at the time he was writing. For Arriaga, the catechism should insist upon the following cardinal points: Only one God exists; God created the universe; the Devil is a fallen angel taking vengeance on God through man and the idols of Indian worship. Man originated in the Creation of Adam and Eve, contrary to the Indian doctrine of multiple human origins. Christ instituted the Sacraments for redemption from original sin. Among the Sacraments, that of confession must be clearly defined, to distinguish it from Indian confessional rites. The doctrine of the intercession of the saints needed special clarification, to avoid the great confusion between the saints and Indian cult-objects (Arriaga, 1920, pp. 127–28). Finally, a radical conflict was present between the Indian and the Christian concepts of afterlife. The traditional Indian view regarded the poor, the old, and the infirm as despised by the supernaturals, in contrast to the ethical affirmations of humility and the love of the poor contained in Christianity (Polo de Ondegardo, 1916 a, p. 8; Arriaga, 1920, p. 53). In brief, *Quechua* pre-Conquest religion subsisted as an integral system of beliefs about divine essence all through the 16th century. As such, it was dominant over Christianity, which was not accepted by the *Quechua* in its essential beliefs until an advanced date in the 17th century (cf. p. 400).

Survivals of Quechua religion:

Objects of worship.—The theogony did not survive intact, but underwent certain processes of deformation and reemphasis. As the *Inca* state was decapitated by the Conquest, so also was its religious symbolism decapitated. Garcilaso presented Pachacamac and the Sun as the supreme binary deities of *Inca* religion, the one invisible, and the other visible (Garcilaso, 1722, vol. 1, bk. 2, ch. 2). Pachacamac, it is said, had been incorporated with *Inca* religion as a political stratagem, to secure the coordination of the Coastal area by recognition of its supreme deity (Calancha, 1638, pp. 365–66). By 1566, however, Pachacamac was no longer taken into account by the official ecclesiastical inquiries into idolatry (Calancha, ibid.).

In general, however, the adoration of celestial bodies was continued by the *Quechua* tribesmen. The rites of the sun, called Punchao or Inti (Valera, 1879, pp. 138–40), took precedence over those of other major planets. However zealously the Christians destroyed the idols and the instruments of idolatry, there remained for Indian worship the mountains and hills, the streams, springs, and lakes, the ocean and many other natural forms whose adoration never ceased (Polo de Ondegardo, 1916 a, p. 43).

Devotion to the pacarinas sometimes determined the place of residence of the tribe, and often proved a serious obstacle to the efforts of the Colonial government to move the Indians to more productive sites.

The theory of multiple human origins, as represented by the belief in the pacarinas, with its complicating ancillary proposition that the progenitor of any species may unaccountably occur in another realm of nature, was the most objectionable heresy the Christians felt it necessary to combat (Arriaga, 1920, pp. 69–127).

Special Colonial forms of static huaca worship were evolved at the mines. The mountains and the mines themselves were implored, as huacas, for a plentiful yield, with nocturnal rites of dancing and drinking. The gold mines were called Coya; the silver mines and their metals, Mama. Mercury and its ores were adored as Ichma or Linpi, while ores in general were addressed as Corpa (Calancha, 1638, vol. 2, bk. 10, pp. 371–72). The mining city of Potosí was adored as a sacred object (Loaysa, 1889, p. 593; Calancha, 1638, pp. 371–72). The spiritual force of the huaca was both contagious and infinitely divisible, so that even a burned fragment, or the place where a huaca had been destroyed, was venerable, or huaca itself. The Indians of Huaylas worshiped in the 17th century at the Rimac bridge in Lima, because their huacas had been jettisoned there in the 1570's (Arriaga, 1920, p. 22).

The mallquis, or mummies of the dead members of the ayllus, were also huacas, and the bodies of the dead lords had their own priests and rites. Throughout Perú, the Indians were in the habit of removing the bodies of the deceased from the churchyards to transfer them to the Machay or mountain caves and niches in which such huacas were kept in the Colonial era. When apprehended in the act, the Indians gave as their reason Cuyaspa, i. e., love for the dead. The custom was prevalent as late as the second quarter of the 17th century (Arriaga, 1920, pp. 14, 25, 61; Calancha, 1638, p. 377).

A social difference was present between the cult of the mallquis and that of the other portable huacas. In any community there were two social strata based upon priority of residence and designated as the Huari (old settlers) and the Llacuaz (immigrants within the memory of recent generations). The number of artifact huacas was greatest among the old settlers, and mallqui worship was more common among the Llacuaz (Arriaga, 1920, p. 138; Calancha, 1638, p. 372).

Artifacts of European manufacture frequently attained status as conopas, such as fragments of glass, silk, or sealing wax. In general, they were regarded as luck pieces or talismans.

Sacrifices.—The sacrifices regarded as appropriate offerings to the deities and cult objects were characterized by their status as materials of value upon which some labor had been expended. It was essential that animal sacrifices be made of domestic animals on which time and labor had been spent, rather than wild animals. Yet the sacrifices of animals were no longer publicly but secretly performed by the *Quechua*. The rites no longer involved valuable livestock, such as llamas, but only guinea pigs, as offerings, and also for divinatory and therapeutic purposes.

Practitioners.—In *Quechua* religion, a sacerdotal caste must be distinguished from the immense number of common "sorcerers." The proliferation of the sorcerers practicing an infrasocial or antisocial magic was a Colonial phenomenon. Christian doctrine contains a distinction between idolatry and sorcery. The former consists either of superfluous worship or false worship; the latter always involves a pact with the demon, regardless of formal cult (Peña, 1698, p. 236). Hence, the priests of *Quechua* religion were always true idolaters, unlike the sorcerers, who might or might not be idolaters.

Both in antiquity and after the Conquest, the sorcerers were men and women of low caste. It was exceptional that nobles or wealthy men engaged in the profession. In the Colonial era, the animal sacrifices which were provided by the client to furnish the sustenance of the spellbinder were commuted to offerings of money, clothing, or food. The number of sorcerers had increased enormously, and Polo de Ondegardo assigns the increase to the general spread of indigence in the Colonial communities. Their services were therapeutic, divinatory, and magical.

Their rites were often practiced with Christian formulas, especially in the treatment of disease. The customary rites of securing confession of sins, and of sucking or extracting the disease from the body of the patient, were alternated with kneeling Christian prayer, sprinklings of holy water, invocations of God and Jesus, and signs of the Cross. The sorcerers also attempted to explain and adapt Christian doctrine, by pronouncing that God's goodness was finite, that the Christian remission of sins was not accorded to great sinners, that natural events were actually governed by the huacas, that the Christian saints were huacas, and that Jesus and the Devil were related as brothers. Hence, the sorcerers played a role in the formation of *Quechua* Catholicism, while bringing support to *Quechua* idolatry. In essence, however, their crafts were contrary to religion whether *Quechua* or Christian, in that their magic was illicit, infrasocial, and proliferant without relation to doctrine. (Arriaga, 1920, p. 41; Polo de Ondegardo, 1916 a, pp. 26–30; Calancha, 1638, pp. 377–79.) Among the White population of Perú, the Indian sorcerers not infrequently enjoyed some prestige, chiefly as healers and diviners; for Europeans to have recourse to Indian sorcery was regarded by the Church as only a venial sin, of no great consequence (Peña, 1698, p. 242).

Ceremonials.—The chief calendrical occasions for huaca festivals were three: (1) at the time of the Corpus Christi festival (Oncoymitta and Intiraymi), when the huacas were adored to prevent the destruction of the crops by drought or frost; (2) about Christmastime, at the beginning of the rainy season, dedicated to lightning and thunder as rain-bringers; (3) the harvest festivals, called Aymoray or Ayrihuaimita (Arriaga, 1920, p. 52).

A variant of the harvest festival was described in detail by Cristóbal de Molina of Santiago, as occurring in April 1535. All the mummies of the *Inca* Emperors, with their attendants, were exposed before dawn along an avenue laid out in a plain near Cuzco. Each mummy was equipped with furnishings relating to its importance. The members of the *Inca* royal caste alone were present, garbed in their richest clothes. As the sun appeared, their chant slowly grew in volume until noon, then diminished until sunset. Manco Inca, richly installed in a litter apart from the others, gave the cues for the performance (Molina of Cuzco, 1916, pp. 160–62).

In certain areas, the sun feast, called Intiraymi, fell on the solstice in June, coinciding with Corpus Christi, and was celebrated simultaneously with the Christian ritual, under its protection (Polo de Ondegardo, 1916 a, pp. 21–22). June was also the month during which the festival dedicated to the Pleiades was celebrated. In the district of Lima these rites were celebrated publicly in 1617. The moment chosen was at the time of the greatest visibility of the constellation, when the crops were in danger of frost. The rites were intended to influence the activity of the constellation with regard to weather (Rel. geogr. Indias, 1881–97, 1:205–06; Arriaga, 1920, p. 76).

In September, after the sowing, the feast called Citua or Situay was secretly celebrated, with many local variants. It was mainly a rite of lavatory purification, attended by blood sacrifices in token of loyalty to the Sun and the *Inca* Emperor (Polo de Ondegardo, 1916 a, p. 23; Molina of Cuzco, 1916, pp. 35–41). As late as December 1571, during the growing season, the old festival of Raymi was still observed in Cuzco itself. During it, puberty rites were performed. In antiquity, the festival had been intimately associated with the idol called Huanacauri. In the 1550's, the *Inca* Paullu housed this idol by his house in Cuzco, and the Raymi festival was celebrated there until the destruction of the figure by the Spaniards. Elsewhere than in Cuzco, Raymi was celebrated in different ways and at different times of year. For example, in Potosí, Raymi was held during the sowing period and again at Corpus Christi, at which times the Indians feasted and drank in costume, and performed various ancient sacrifices (Polo de Ondegardo, 1916 a, p. 19 ff.; Cobo, 1890–95, 4:36).

The Christianization of the Quechua:

Extirpation of idolatry.—The failure of the men of the 16th century to achieve the Christianization of the *Quechua* may be traced chiefly to the sparse and undermanned organization of the Church in Perú, to the profane disturbances of the Civil Wars, and to the powers of resistance or survival implicit in native *Quechua* religion. Early in the 17th century, however, the Church threw its forces into an ambitious, systematic, and successful campaign to displace idolatry. By 1660, more or less, the Catholicization of the *Quechua* had been achieved.

On the one hand, genuine conversions were sought. The priests, friars, and missionaries made it their aim to secure the good will of the secular leaders of Indian society. An intensive program of education was conducted among the children of the various communities. The civil and economic status of the Indians was improved by teaching them new crafts. Among ordinary Indians, the priests attempted a gradual eradication of the most salient vices. Sodomy and bestiality, for instance, drew reproof or punishment more immediately than the simple huaca worship practiced by most Indians. Huaca worship, in turn, was treated more severely than drunkenness and trial marriage (Peña, 1698, pp. 138–43, 149–51).

On the other hand, very stern repressive measures were taken against the professional practitioners of idolatry. The native priests and sorcerers were arrested and isolated from their communities. The corregidores were entrusted with the task of seeking out the eremitic professionals (Anonymous, 1923). All cult sites, idols, and instruments were to be destroyed. The ritual dances and songs were not to be performed, and the priests undertook wherever possible to destroy the drums, feathered garments, animal masks, and panpipes associated with these rituals. In the churches continuous predication against idolatry was employed, and local informers were encouraged with the promise of absolution for their past participation (Peña, 1698, pp. 246–47).

Thus, under Viceroy Montesclaros (1607–15), 600 idols from Huarochiri alone were burned in the public square in Lima, and an Indian idolater named Hernando Paucar was publicly flogged in the presence of the Viceroy. Thereafter, the campaign to extirpate idolatry assumed extravagant proportions. In 1617–18, systematic idol-and-witch-hunts were conducted. Nearly 6,000 persons confessed to idolatry in the corregimiento of Chancay alone. In that same district, 679 "sorcerers" were discovered. The priests confiscated 603 chief huacas, 3,418 conopas, 617 mummies (mallquis), etc., in some 31 settlements in the Archbishopric of Lima alone (Arriaga, 1920, pp. 13–16).

The great campaign of extirpation was accompanied by a systematic effort to extend the peripheral conversions. Yet, in 1626, the feeling existed among the clergy that little or nothing had been achieved. An archepiscopal report of that year expresses horror at the discovery of numberless communities in which no Indian did not engage in idolatry, and the fault was blamed upon the small numbers of the clergy in Perú. It was even recommended that the enforcement of Christianity among the *Quechua* be confided to the Inquisition (Tovar, 1873, p. 327 ff., 338–39). As late as 1646, archepiscopal inspectors were appointed to travel throughout the provinces in search of idolaters (Tovar, 1873, p. 413).

It is somewhat surprising, therefore, to read in 1667 that genuine idolatry no longer existed in Perú (Peña, 1698, pp. 231–40). The campaign of extirpation had ceased; the Indians were regarded as practicing Christians, and the Church expressed satisfaction with the spiritual condition of the Indian communities. Of course, a double process is present: true idolatry was on the wane, but also the clergy became more tolerant of "superstitions" which formerly had been regarded as pure idolatry.

From the churchmen's point of view, an old scholastic distinction between idolatry and superstition made the change of attitude possible. The distinction turned upon the question of whether the subject apprehended divinity in the objects of his worship. If, in the view of the clergy, the Indians practiced huaca worship without attributing any divine essence to the huacas, they were the victims only of superstition, and defined as those who "seek good or flee evil by useless and disproportionate methods" (Peña, 1698, p. 240). Thus, it became possible for many baptized Indians, while sincerely believing in Christianity, still to revere their huacas, certain stones and mountains, without becoming idolaters. The churchmen understood that the object of this veneration was merely to propitiate the irrational forces of nature, and that as such it could be tolerated by curates as being nonheretical, i.e., without error or infidelity, although in effect it contaminated the worship of the True God and was to be discouraged.

Gradually, the conditions under which the ritual was performed came to be taken into account by the clergy. For instance, when Indians participated in the great huaca festivals, it was granted that the participation might be undertaken without interior faith. If the Indians were moved by the compulsions of Indian society, the act was external and not to be regarded as true or perfect idolatry. In any case, it was urged after 1667 that mildness be shown in the punishment of actual cases of idolatry because of the scanty indoctrination and the limited understanding of the Indians (Peña, 1698, pp. 232–33). When an Indian threw stones upon an apacheta, the act would constitute heretical idolatry only if performed in the belief that divinity resided in the heap of stones. If, on the other hand, the offering were made to no assumed divinity, the act was regarded as nonheretical idolatry. Finally, if the offering were made in the mere belief that fatigue was thereby lessened, the act was regarded as superstitious and as only a venial sin (Peña, 1698, pp. 239–40).

After 1650, many Indian rites which had earlier been the objects of the campaign to extirpate idolatry suddenly entered the class of relatively harmless superstitions. Among them were such customs as deforming the heads of infants, various puberty rites (as in the warachikoy festival, when the hair of the boys was cut for the first time, and in the rites of ablution performed when girls first menstruated), the chuquiragua ceremonies, in which engaged couples were driven through a bonfire of green branches, and certain rites of therapeutic magic. Among the last named were such customs as placing the garments of the sick person out of doors, with portions of herbs or corn, so that they might be stolen by casual passers. Therapeutic baths of ritual character, as well as the custom of spitting into ichu bushes were also tolerated by the clergy. The household ritual of placating the fires on the hearth with offerings of corn or chicha, public lamentations during eclipses as well as the beating of the dogs, the placing of guardian stones in the fields, and the many rites connected with house building also came to be tolerated (Peña, 1698, pp. 239–40). In these instances, the clergy attempted to determine whether the work of the Demon was present by the following standard of measure: If the effect of the action was measurably greater than its cause, diabolic intervention was assumed to be present; if, however, the effect was less than the cause, the observance was regarded as unaffected by demonic influences and therefore to be classified among the harmless instances of vain observance. Clear instances of this latter were the innumerable beliefs in bad omens, such as snakes crossing one's path, the augury of a sterile year from the birth of twins, the reading of evil omens in the cries of birds and animals, prognostications from the twitchings of muscles, and the various forms of divination in which coca was used (Peña, 1698, p. 241 ff.). An example of the latter was the custom of spitting into the hand with fingers pointing downward; the course of the coca spittle was taken to predict the outcome of the event.

It must not too readily be taken for granted that all the concessions came from the clergy. The 17th-century distinctions between heretical and nonheretical idolatry, between superstition and vain observance, were far from being purely doctrinal solutions to the problem of Christianization. On the contrary, the religious education imposed upon the parishes insisted vigorously upon the fundamental articles of faith. A community continued in its course of heretical idolatry unless it displayed knowledge of the canonical books of Holy Scripture as revealed by the Holy Ghost; knowledge of the traditions of the Church as codified by the Council of Trent; knowledge of the articles of faith contained in the Credo; knowledge of the Pater Noster and the Commandments. Among the Indians, these teachings were frequently confused and perverted. For instance, the Indians commonly held the Trinity as three divisible and separate persons. The Father was not infrequently regarded as older than the Son. A natural confusion arose when the Indians, to the horror of the clergy, identified the material fabric of the Church with its mystic substance, or when God was identified with some temporal monarch, and confused with the King of Spain. Yet the clergy regarded these errors as anything but heretical, because of the ignorance of the spirits in which they arose (Peña, 1698, pp. 268–85) and because of the imperfections of instruction.

Catholicism became a functioning part of *Quechua* life when the Indians accepted Christianity's system of divine essence. The survivals of *Quechua* ritual and the doctrinal errors or confusions mentioned just above may not be taken as proofs that the Indians rejected Catholicism. On the contrary, the cardinal question is always that of divine essence. As long as the huacas partook of divinity, their worshipers were not Christians. In the moment, however, when divinity forsook the components of *Quechua* religion, that religion ceased to exist, however vigorously the veneration of the huacas and other cult objects may have continued. Ever since the mid-17th century, *Quechua* religion has been Catholicism, although its ritual texture still preserves innumerable intact constellations of pre-Conquest observances.

The Catholic clergy—The Christianization of the *Quechua* was, in many respects, the most profound change wrought in *Quechua* life during the Colonial era. At no point can it have been said to have occurred without the direct interference of European clergy, whether regular or secular.

In 1569, the total number of priests and friars resident in the Viceroyalty of Perú was about 350, distributed among 477 repartimientos (Anonymous, 1889, p. 172). The estimated need at that moment was for some 1,500 curates, and in Mexico at this time a smaller total population was served by many more spiritual ministers. In 1583, accordingly, it was resolved in the Ecclesiastical Council held in Lima that each curate should serve no more than 200 to 300 families (Tovar, 1873, pp. 445–46; Levillier, R., 1919 a, pp. 273–415). This optimum ratio was never uniformly achieved, but by 1638, the total number of active curates had been increased to a point at which the average parish contained about 358 families (Vázquez de Espinosa, 1942, pp. 22–58).

Hence, if Christianization requires an ample working staff of curates and missionaries, the epoch of the most rapid Christianization may be assigned to the period in which the number of European workers was most rapidly expanded.

The maintenance of the curates in the parishes was, of course, provided by the parishioners. The stipends were fixed by a synodal constitution, whence they took the name of sínodos. Payment to the curate was made out of the tribute collected by the corregidor. The sínodos, however, were inadequate for the needs of the ministers, who increased their income by various methods (Montesclaros, 1859, pp. 13–14). For example, the priest collected funds from the various lay organizations (cofradías) in the parish, and he benefited from the many gifts that were customary. Called camaricos, these consisted mainly of foods.

The curates, whether regular or secular, were always men of European caste. The intention of the Church itself had long been to encourage the creation of a clergy recruited at least in part, from the native populations. For instance, a papal brief from Clement XIII in 1766 confirmed and repeated earlier resolves, taken in 1697 and 1725, that Indians should be admitted to the religious orders, educated in the colegios, and promoted according to their capacities to suitable positions and dignities (García y Sanz, 1876, p. 225). The frustration of these good intentions on the side of the hierarchy was achieved by the civil government through the Spanish institution known as royal patronage. Not long after the Contact, the Papacy had conceded the Spanish Crown the rights of appointment to ecclesiastical positions in America. (See Mecham, 1936.) In Perú, accordingly, the practice was for the Bishop to form panels of three names for each benefice or curacy; from such panels the Viceroy or the President of the Audiencia, as vice-patrons representing the Crown, selected the effective appointment (Juan and Ulloa, 1826, pp. 335–37). Hence, as the institution of corregimiento had deprived the Indians of participation in Colonial government (see pp. 345–347), so did royal patronage deprive them of participation in religious government. During the great Indian rebellion of the 1780's, when the Indian rebels sought to capture Spanish institutions, it was characteristic that ecclesiastical offices also were appropriated by Indians. For example, in 1782, an Indian from Paucartambo, named Nicolas Villca, consecrated himself Bishop of Cuzco. He was tonsured, and accepted the hand-kisses and genuflexions of his followers, while dispensing pastoral benedictions (Angelis, 1836–37, p. 170).

The lay associations.—The prestige system of the modern *Quechua* community (see Mishkin, this volume, pp. 443,459), designated as the institution of cargos, has its origin in the intricately organized lay associations of the Catholic parish, called cofradías in the Spanish-speaking world, or sodalities in English. In canon law, the cofradía, or sodality, is regarded as an association of the faithful with episcopal approbation, existing to promote the maintenance of the cult. The cofradías are among the most characteristic institutions of Spanish Catholicism; they flourished most amply in Spain during the 16th and 17th centuries, and served as an instrument of the Catholic Reform (Pfandl, 1924, p. 83).

In Perú, the existence of Indian cofradías (fig. 37, *d*) is reported as early as 1575 by Father Arriaga. One dedicated to the relief of the souls in Purgatory was established in that year in the district of Huaylas, immediately after the destruction of the huacas by the priests. About 1610, several cofradías are reported in Cuzco (Romero, 1923 a; Arriaga, 1920, pp. 85, 99). After 1650, more or less, cofradías were established wherever parish conditions permitted them.

Their membership was usually restricted to 24, including two major-domos annually elected under the curate's supervision. The members were selected from within a single parish. Ideally, all the adult males of a parish should belong to the cofradías; the parish contained as many cofradías as were necessary for the maintenance of the various altars, the seasonal and annual Church ceremonies, and the charitable enterprises of the community. Certain cofradías, moreover, offered the privileges of mutual benefit associations. The membership was responsible for the funeral expenses of its members, and occasionally undertook to provide for the families of deceased members. But the main function of the cofradía was always to subsidize the festival occasions of the cult, especially on certain saints' days and during Holy Week. Its members might endow the association by testamentary disposition, but whether endowed or not, the association was held responsible by the curate for providing cult expenses (Juan and Ulloa, 1826, pp. 647–49; Haenke, 1901, p. 113).

The wide diffusion of the cofradía system cannot be assigned to any date earlier than the general Christianization of the *Quechua* and must, therefore, be placed after 1650. Almost no record of the cofradía structure within a single Colonial community has been preserved, but its integral survival and amplification in many modern *Quechua* communities suggest the importance of studying it in great detail. The ritual life of the Catholicized *Quechua* very likely unfolded almost entirely within the sodalities, with their costumes, insignia, privileges, responsibilities, and interlocking memberships.

The Catholic calendar.—The Church regarded the non-observance of certain festivals by the Indians as a mortal sin. Every Sunday was, of course, a compulsory observance, as well as Good Friday and Saturday, Easter Sunday, and the Nativity. Other compulsory festivals were the days in the calendar dedicated to the Circumcision, the Ascension, Corpus Christi, the Nativity of the Virgin, the Purification, the Annunciation, the Assumption, and the days dedicated to Saint Peter and Saint Paul. In addition to these festivals, each month contained other lesser holidays, usually celebrated in services and processions by some part of the community: In January, the feast of the Kings; February, St. Mathias' day; March, St. Joseph's day; May, St. Philip and St. James, and the Invention of the Cross; June, the Nativity of St. John the Baptist; July, St. James the Greater and St. Anne's days; August, St. Lawrence and St. Bartholomew; September, St. Matthew and St. Michael; October, St. Simon and St. Judas; November, All Saints' Day and St. Andrew; December, St. Thomas, St. Stephen, St. John the Evangelist, the Day of the Innocents, and St. Sylvester (Peña, 1698, p. 672). It cannot be emphasized too strongly that religious education was achieved by this intricate ritual calendar. Nearly one-fourth of each year, it is true, was consumed in its celebration, but it will be noted that the feasts invoke all the major events of the genealogy and Life of Christ, and that among them each and every one of the apostles is commemorated. By this means, the ritual calendar itself became a lengthy catechetical exercise; the parishioners learned the contents of the New Testament through direct participation in its festivals. Among the cofradías, arduous preparations were undertaken for the appropriate celebration of the particular day. Individual prestige was accumulated by the discharge of the major-domo's responsibilities, and at many points the prestige system and the experience of Christian doctrine coincided within the demands of the ritual calendar.

MYTHOLOGY AND LITERATURE

Mythology.—The gradual historical transformation of *Quechua* mythology is sparsely documented. A detailed account of the mythology and ritual of the Province of Huamachuco, written about 1561, deserves special mention (Augustinians, 1865, pp. 5–58). A creator named Ataguju was given a triple aspect suggesting an influence from Christian Trinitarian teachings. The Christians figured in the mythological narrative at a time prior to the creation of the Indians by Ataguju. The Conquest also assumed mythological proportions, and among its consequences was the multiplication of the huacas by fragmentation (cf. Arriaga, 1920, pp. 23–25).

Messianic cult.—The hostile fusion of Christian symbols with *Quechua* mythology assumed a violent expression in a religious outbreak in 1565 (Molina of Cuzco, 1916, pp. 93–103). As a phenomenon of revived huaca worship, it spread throughout the Provinces of Chuquisaca, La Paz, Cuzco, Huamanga, Lima, and Arequipa, both among the hatunrunas (encomienda dwellers) and the yanaconas (urban Indians). It was reputed to emanate from Vilcabamba, whence it was disseminated by Titu Cusi's agents in order to alienate the pacified Indians from their Spanish masters. It was quelled only in 1572 with the suppression of the separatist government of Vilcabamba and the execution of the young *Inca* ruler, Tupac Amaru I.

The cult centered about a belief in the renaissance of the huacas, and it was associated with a ritual chant. It was believed that all the huacas had returned to life, some being allied with the ritual of Pachacamac, and others with the cult of Tiahuanaco. These two factions of huacas were united in giving battle to the Christian god. The battles took place in the skies, and it was predestined that, as God had defeated the huacas during the Conquest, so were the huacas now to destroy God and the Spaniards.

The huacas had planted crops of worms with which to destroy the hearts of the Spaniards and their horses and livestock, as well as those Indians who had embraced Christianity. All adherents of the new huaca cult were to renounce baptism, and to cleanse themselves by fasting, and abstinence from Spanish customs and tools.

The huacas were no longer to reside in objects and places as before, but were to incorporate themselves in the bodies of the faithful followers of the cult. Hysterical behavior marked the reception of the huaca by an Indian, and the spirit then was enshrined in a small oratory, where sacrifices were offered and dances performed. It has been suggested that this last aspect of the cult was influenced by the Christian theory of demoniac possession (Molina of Cuzco, 1916, p. 99, n. 265); certainly the whole phenomenon bears the closest affinities to North American messianic, or Ghost Dance, religions.

Literature.—The existence of a literature in *Quechua* written by Indians is difficult to prove. The corpus of *Quechua* texts is incomplete, but there is no evidence that its monuments were composed other than by Europeans and Mestizos. An Indian theater flourished, it is true, to such an extent that its performances were forbidden in 1781, in connection with the execution of Tupac Amaru (Rojas, 1939, p. 108), and Harcourt asserts that the play "Ollanta" was instrumental in fomenting the rebellion itself (Harcourt, 1925, p. 180). Its texts, however, are probably of European composition, such as the one written early in the 19th century by Pedro Zegarra, who had also translated Racine's Phèdre into *Quechua* (Middendorf, 1890–92, 3:116).

Older *Quechua* literary texts, the religious plays or autos sacramentales, were composed by European curates in the 17th century. Such was "The Prodigal Son," in three acts and 23 scenes, written in the mid-17th century by Juan de Espinoza-Medrano, a Creole archdeacon of the cathedral chapter in Cuzco (Middendorf, 1890–92, 4: 2).

The text of "Usca Paukar," a play in which the central figure is a beggar of *Inca* descent, also may be attributed to a European in the

19th century. Middendorf points out its romantic tendencies, and certain influences from the Faust cycle of northern European literature (Middendorf, 1890–92, 3: 94–95).

In poetry, many chants, lamentations, and songs (yarahuis) published by Harcourt (1925) were recorded by him for the first time. He notes that Spanish forms (the redondilla and the copla) saturate modern *Quechua* verse. The insistence upon allusions to the dove is greater than in European folklore, and characterizes *Quechua* verse (Middendorf, 1890–92, 4: 220). Since pigeons were introduced from Europe, this diction either is Colonial or an adaptation of pre-Conquest bird-symbolism.

The failure of the Indians to record their own compositions deprives their life of a literary component, which, on the other hand, is a capital constituent of Colonial culture proper.

EDUCATION

One consequence of the campaign against idolatry was the renewed foundation of collegiate establishments for the education of the sons of the curacas. The Colegio del Principe was founded by Arriaga in 1619 in the building which housed the Jesuit novitiate in the Indian ward of Lima, called El Cercado. At the invitation of Viceroy Esquilache, 14 sons of curacas from various provinces foregathered to receive Christian instruction. At the Viceroy's expense, they were clothed in special garments of green and red, and obliged to wear shoes, stockings, and hats. By 1621, the Colegio housed 30 students, living in dormitories, and receiving instruction from a Jesuit in reading, writing, singing, and counting. The day was spent mainly in doctrinal and ecclesiastical exercises, as in a monastic establishment. (Arriaga, 1920, pp. 118–19, 167; Tovar, 1873, p. 237; Colegio, 1923.) In the 18th century, the curriculum consisted chiefly of Latin and Spanish, grammar and rhetoric, mathematics and music. A similar establishment was founded in Cuzco in 1628 as a Jesuit boarding school called the Colegio del Sol or Colegio de San Francisco de Borja. Both in Cuzco and Lima the boys matriculated at the age of 10, remaining interned until 18 (MacLean, 1943).

A counterpart of the Lima establishment was founded at the same time as a house of correction. It was likewise situated in the Indian ward of Lima, and bore the name Casa de Santa Cruz. In 1621, some 40 native priests and sorcerers were incarcerated there and earned their keep by spinning wool. (Arriaga, 1920, pp. 6–7, 168; Tovar, 1873, pp. 236–37.)

On the various repartimientos, the officials representing the ayllus (primeras personas, segundas personas, mandones) were the immediate objects of clerical or civilian instruction in matters of doctrine, language, and trades. The education to a trade, such as that of painter or metalworker, was felt necessary to prevent the officials of the minor government from becoming financial and moral burdens to the community. (Matienzo, 1910, ch. 6, pp. 16–17; Rel. geogr. Indias, 1881–97, 1:180; Means, 1932, p. 154.)

Popular education was conducted entirely by catechetical methods in the parishes, and it was restricted to the knowledge necessary for the discharge of the simple tasks of daily devotions (MacLean, 1943, p. 57), such as incipient literacy, rudimentary arithmetic, and the musical culture necessary for liturgical purposes. (Cf. Vargas, 1940; Mongrovejo, 1673, p. 18.)

THE PROBLEM OF THE QUECHUA COMMUNE

In the last analysis, the *Quechua* commune is the repository and the unit-cell of *Quechua* "culture." Recent estimates yielded about 3,000 communes in Perú, sustaining 1,500,000 dwellers (Poblete, 1938, pp. 54–55, 60). Discussion of the commune, therefore, occupies a central position in recent writings upon social problems; its survival means the survival of an Indian society in Perú; its extinction will bring the disappearance of any recognizable Indian cultural component of Peruvian nationality. The correct solution to the problems of the *Quechua* commune is today a matter of grave political interest (Váldez de la Torre, 1921). The retention of a communal regimen of property by Indian villagers is the main issue. The present paper should demonstrate the seemingly great survival value possessed by such communes. They have withstood many generations of attack and undermining, from encomienda to latifundismo, from the yanaconate to the colonos and the industrial proletariat of modern Peruvian society. The explanation may be that no mode of exploitation can survive in Perú without having the reservoir of labor in the communes to draw upon. It is difficult to imagine the disappearance of the *Quechua* commune otherwise than under conditions in which the institutions or groups both exploiting it and yet vitally interested in its preservation should also disappear. The age-long survival of the commune is, therefore, an attainment of the successive governments, whether *Inca*, Colonial, or Republican, which have exploited it. As long as it survives in its habitually depressed condition, new exploiters will be attracted to encouraging its continuation, and they will be favored by its singular tenacity and stability.

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THE CONTEMPORARY QUECHUA [1]

By Bernard Mishkin

INTRODUCTION

POPULATION AND DISTRIBUTION (SEE MAP 1, NO. 4)

Of Perú's total population of 7,023,111 (Census of 1940), 2,847,196, or 40 percent of the population, were classified as Indians, and 3,283-360 as Mestizos. In the 1876 Census, the Indian component of the population was put at 57.6 percent of the total. These figures reveal a noteworthy trend. Perú, like other of its neighbors in the "Indo-American" bloc, is on the road to becoming a Mestizo country (Censo Nacional de 1940, Resultados Generales, Primer Informe Oficial, Lima, 1941).

It should be pointed out that the results of the 1940 Census do not pretend to describe the racial composition of the population in exact terms. No elaborate biological criteria were used to set off one group from the other, but rather an effort was made to indicate the larger divisions in the population on the basis of rough common-sense judgments. It was ascertained that 13 percent of the population personally filled in the blank on race; 87 percent were entered in one or the other racial categories by the census taker. Generally speaking, subjective factors such as personal preference, or arbitrary choice, seem to have played a large part in determining race designation. Cultural criteria doubtless were utilized to some extent. But the cultural criteria that might have been considered in separating the Indian from the White-Mestizo part of the population were left to the analytical ability of each individual census taker. The difficulties in the way of drawing up a usable list of such criteria are clear enough, so that no objective formula for classifying the population in terms of cultural divisions was at hand. What criteria the census taker selected and to what extent they influenced his judgments cannot be guessed.

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[1] This summary of *Quechua* ethnology is based mainly on field data collected by Dr. Bernard Mishkin in the course of study of a *Quechua* village in the Department of Cuzco in 1937–38, and on briefer personal surveys in 1938 and 1941–42. The village of Kauri is situated in the high Andes of Quispicanchis, between the valley of Urcos and the Marcapata on the eastern side of the mountains. It may or may not be a typical *Quechua* community; there is little published material with which to compare it. Among the few sources which have been drawn upon for comparative data is the work, "Nuestra Comunidad Indígena," by Hildebrando Castro Pozo (1924). Three little-known papers of great value which are quoted frequently in the following pages are: "Los Varayocc," by Pastor Ordoñez; "Sistemas de Arrendamiento de Terrenos de Cultivo en el Departamento del Cuzco y el Problema de la Distribución," by Francisco Ponce de León; and "El Ayllu de Qqueros," by Luis Yabar Palacios. All three works may be found in the Revista Universitaria of Cuzco.

An extensive list of the cultural criteria that might fit the needs of the census taker in the field would include language spoken, type of settlement, utilization of land, amount of land owned, clothing worn, nature of religious worship, etc. Of all these, language is certainly the least complicated to deal with statistically and is of primary importance. The 1940 Census offers the following pertinent data:

TABLE 1.—*Language groups of Peruvians over 5 years of age* [1]

Language	Number of speakers	Percentage of speakers
Spanish	2, 443, 390	46. 7
Quechua	1, 625, 156	31. 0
Spanish and Quechua	816, 966	15. 8
Aymara	184, 743	3. 5
Spanish and Aymara	47, 022	0. 9
Unclassified	111, 075	2. 1
Total	5, 228, 352	100. 0

[1] Adapted from table, facing page 24, of Estado de la Instrucción en el Perú Segun el Censo Nacional de 1940 (Informe Especial), Lima, 1942.

TABLE 2.—*Language groups, exclusive of Spanish, among Peruvians over 5 years of age, arranged by Departments* [1]

Department	Indians speaking—			Total population
	Quechua	Quechua and Spanish	Aymara	
Amazonas	1, 715	9, 970	---	53, 982
Ancash	194, 888	105, 135	---	354, 892
Apurímac	186, 448	28, 819	---	216, 243
Arequipa	37, 817	38, 347	817	225, 244
Ayacucho	246, 947	49, 942	---	299, 769
Cajamarca	3, 368	21, 808	---	405, 975
Callao	---	3, 903	---	72, 295
Cuzco	326, 238	77, 378	61	411, 298
Huancavelica	160, 153	40, 434	---	203, 128
Huánuco	97, 557	68, 125	---	193, 235
Ica	2, 157	14, 982	---	118, 371
Junín	112, 397	169, 921	---	361, 878
La Libertad	534	3, 493	---	319, 514
Lambayeque	4, 562	6, 856	---	162, 967
Lima	17, 072	81, 814	---	721, 818
Loreto	8, 881	34, 527	---	137, 932
Madre de Dios	92	465	---	4, 098
Moquegua	4, 414	3, 856	2, 651	29, 034
Piura	87	306	---	343, 357
Puno	210, 236	40, 736	176, 129	463, 080
San Martín	9, 580	15, 662	---	77, 197
Tacna	13	391	5, 085	31, 684
Tumbes	---	96	---	21, 212
Unreported	---	---	---	149
Total	1, 625, 156	816, 966	184, 743	5, 228, 532

[1] Adapted from table facing page 24, op. cit.

Study of the foregoing tables shows that the *Quechua*-speaking population, including bilingual persons, are exactly equal in number to the Spanish-speaking inhabitants of the country. Those speaking

Spanish only are a minority of the whole population, and are concentrated mainly along the coast. The *Quechua* speakers, as the table of political divisions demonstrates, make up the majority of the population in the central and southern departments. Cuzco, with 326,238 using *Quechua* exclusively and 77,378 bilingual residents of a total of 411,298, is 98 percent *Quechua* speaking. In Ayacucho, all but 1 percent of the population can and do speak *Quechua*. The center of *Aymara* in Perú is Puno, while some *Aymara* islands exist in Tacna and Moquegua.

It is apparent that bilingualism is a common phenomenon in Perú. Approximately 16.5 percent of the population over 5 years of age are classified as bilingual (Spanish-*Quechua* and Spanish-*Aymara*). A small percentage of the population can justifiably be called trilingual, using Spanish, *Quechua*, and *Aymara* with equal frequency in the round of daily activities. The town of Puno is perhaps the best case of a trilingual center.

Proficiency in handling Spanish and one of the Indian languages is often taken to be the mark of a Mestizo. Standing between the Spanish-speaking Coastal citizen and the Andean Indian, the Mestizo is the interpreter, the middleman, the social, economic, and political link between the two poles of Peruvian life. But the linguistic criterion alone does not define the limits of the Mestizo group; other cultural factors tending to give the Mestizo greater numerical as well as political importance come into play.

Whatever distinctions are made between Mestizo and Indian must depend for their validity upon the object of such distinctions. In reality, the two groups merge. A few European traits have penetrated to even the most isolated Indian cultures; similarly, certain concepts peculiarly Indian have found their way to the most conservative Spanish descendants. Except for a small and distinct element, which is wholly Western in its mode of life and thinking, the various levels that comprise Peruvian national culture are fluid in character, each spilling over into the next. Any segment of the population curve will contain groups representing varying degrees of Indian and Mestizo status. The same individual may be considered Indian from one point of view or be classified as a Mestizo from another. To take an obvious example, the *Quechua*-Spanish division of the bilingual population, a seemingly homogeneous unit, naturally breaks down into (1) those for whom *Quechua* is primary and Spanish secondary, (2) those for whom Spanish is the primary language, and (3) those equally proficient in the two languages. Or by another type of analysis one might distinguish those literate in both languages, those literate in only one, exceptional speaking ability in both or in one language, average or poor speaking ability in both or in one, knowledge of a market vocabulary (500 words) in one or the other language, etc.

Here we have any number of differing types of *Quechua*-Spanish bilingualism which may be made, if so desired, to correspond to the various shades of Indian or Mestizo. In the light of these considerations, the precise proportion of Indians to Mestizos in the country is of minor significance.

None of this denies the existence of the *Quechua* Indian as a fundamental reality of contemporary Perú. In the popular sense, the *Quechua* Indian signifies a social problem of national import. Ethnologically speaking, the label is applied loosely to a Highland folk whose culture is an intricate complex of native and foreign elements, the end-product of historic growth and change. The *Quechua* Indian, it may be said, constitutes the peasantry of a nation. Hence, the ethnologist confronts not only a distinct culture but a distinct class. The *Quechua* Indian is not a primitive tribalist keeping to his circumscribed corner of the country. He has spread out through practically every Department and Province.

During the past decades, *Quechua* Indians have appeared in large numbers in the Coastal centers and industrialized towns. Movement in another direction was observed by me while making a brief survey of the La Merced District in 1942. I noted that the *Quechua* of Central Perú have begun slowly to infiltrate into the jungle area and take up agriculture in the sparsely settled lands east of the Andes. *Quechua* settlers have pioneered in the Amazon Basin from the earliest times. However, there is reason to suppose that the past few years have witnessed a systematic and determined migration in that direction. Such a migration had already begun in the 16th century. (See this volume, p. 337.) The ease with which the *Quechua* are adjusting to conditions of life and work in the Montaña suggests that under slightly favorable conditions the change of altitude and climate is not so disastrous as has so often been pointed out.[2]

CULTURE

SUBSISTENCE ACTIVITIES

The *Quechua* are basically agricultural. To a lesser or greater extent, herding is associated with cultivation of crops, though in some instances, mainly in the punas of southern Perú, the herding of domesticated animals becomes the major activity of the community. The land in these regions is left uncultivated for the most part. The best agricultural lands, in the valleys (pl. 93, *top*), are little suited to the breeding of llamas and alpacas, while, in contrast, the punas are not capable of effective agricultural utilization. Hence, in the lower altitudes, agriculture is the main activity, with herding relatively little developed; in the high altitudes, herding tends to take first place. In the middle altitudes there seems to be a more balanced integration of the two activities, one complementing the other, even though grazing here can be considered to play the subordinate role.

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[2] See map 6, vol. 3.—ED.

Practically everywhere in the Andes most of the *Quechua* produce a surplus for a market and participate to some extent in a money economy. The market may be a restricted one, decentralized and contributing little to what may be called the national economy, yet it cannot be sustained that the *Quechua* produces for his own needs alone. Trade, both of produce and handicraft articles, is highly developed, and, with the improvement of roads and means of transportation during the past few years, agricultural production is becoming ever more geared to the requirements and dictates of outside consumption.

Agriculture.—Typical *Quechua* agriculture is characterized by adherence to a simple traditional technology and to an intricate division of labor, quite as much a survival as the technology. Generally, draft animals are not used, and the most complicated instrument used by the *Quechua* agriculturist is nothing more than a primitive digging stick whose only concession to modernity is the fact that it possesses an iron blade. Irrigation is known practically everywhere among the Indians, though it is practiced in the simplest way possible. Occasionally, types of terracing (pl. 93, *bottom*) are used, which, however, are not infrequently of ancient construction.

Despite the Indian's great expenditure of effort in attempting to cultivate land of uneven fertility, he is able to extract relatively little reward for his labor. The land is too often poor and exhausted; the Indian's own poverty does not allow him to obtain adequate fertilizer; an undeveloped technology prohibits intensive cultivation and maximum utilization. Most important of all, artificial land scarcity has reduced *Quechua* landholdings to a point at which large numbers of Indians own insufficient or no land to meet their own food requirements.

Hacienda agriculture.—Some reference must be made to Peruvian hacienda agriculture, which exists in the midst of the *Quechua* community and on which it depends for labor supply. In the majority of haciendas of the Andes, agricultural methods differ little from those found in the *Quechua* villages. Here, more often than not, the colonos and yanaconas are left to their own devices by the hacendado so long as they abide by their contracts, give their labor, and deliver to the hacendado his proper share of the total produce harvested. Farm technology is slightly more advanced, and it may be said justifiably that cultivation in these haciendas is commonly less efficient than in the community farmlands. Absentee landlords, lack of capital, poor communications and transportation facilities, and enormous size of holdings contribute to produce as low a yield per hectare in the hacienda as in the community.[3]

The situation is far different in the great Coastal haciendas and in a few model haciendas of the Sierra. Although mechanization of agriculture has not proceeded very far, large-scale irrigation together with detribalized farm labor has been responsible for a highly successful plantation agriculture (Bowman, 1916). The typical Coastal hacienda is carefully managed in distinction to that of the Sierra. Private capital and government assistance are made available to them. A patronizing policy toward farm labor has created an effective, relatively healthy force of Mestizo and *Quechua* wage-laborers whose standard of living is patently superior to that of the free cultivators and sharecroppers of the Sierra. Finally, the Coastal haciendas produce crops—cotton, flax, sugarcane—almost exclusively for a world market. Prices translated into local terms signify tangible profits over the cost of production.

Crops.—There is no sharp division between the crops produced by the Indian cultivators and hacienda production. Potatoes, maize, barley, ocas (*Oxalis tuberosa*), broadbeans (*Vicia faba*), quinoa (*Chenopodium quinoa*), wheat, ullucos (*Ullucus tuberosus*), mashuas (*Tropaeolum tuberosum*), cañahua (*Chenopodium pallidicaule*), and others are grown by the *Quechua* and haciendas both, depending on the altitude, climate, and the quality of the land. Moreover, *Quechua* communities—Carabaya, Abancay, Lucanas, Tayacaja, Tarma, Pachitea, Santa, and Piura—have long cultivated crops associated usually with hacienda production such as sugarcane, cotton, and fruit (Castro Pozo, 1924, p. 433). Three most important food crops for the *Quechua* in Puno, Cuzco, Arequipa, Huancavelica, Ayacucho, Junín, Lima, Ancash, and Cajamarca are maize, potatoes, and barley. Cultivation of maize is, of course, restricted to the lower altitudes and to the sheltered valleys. Quinoa is grown especially in the south, but usually in small quantities. Ocas and lisas are cultivated in sizeable quantities and, as in the case of potatoes, barley and maize enter the market to play an important role in the local economy.

Farming methods.—There are two main seasons for the agriculturist outside the Coastal desert. The dry season runs from May to October; the rainy season from October or November to May. Planting and harvesting seasons vary considerably in different parts of *Quechua* territory. In southern Perú, however, an early and late planting is commonly practiced. Early planting (misca) is to be found where some irrigation is used and begins about the first of August. Late planting (jatun tarpuy), where the water supply is deficient, starts during the first week of October. The haciendas, which nearly always have facilities for irrigation, thus plant early potatoes, maize, and barley for fodder.

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[3] This statement is based on observation. Adequate statistics are not available since the *Quechua* is averse to submitting accurate data concerning agricultural production.

In the community of Kauri, the early planting of beans extends from July 25 to August 8. Occasionally, a crop of potatoes is sown during this period. The real planting season begins around the fiesta of the Virgin of Rosario, October 7, and runs through December. Potatoes, quinoa, ocas, lisas, and barley are planted during this period. The first harvest of ocas and lisas in Kauri takes place around the first of May, followed by the digging of potatoes and reaping barley from San Juan (June 24) to Santiago (July 25).

Plowing begins shortly after Carnival, depending in Kauri on when the Governor of the district arrives to reapportion the land. This frequently occurs around March 14. No one may begin plowing until "repartición" of the arable land has been completed, else he is fined. Once the boundaries have been reaffirmed by the Governor of the district, plowing goes on until Easter time.

Arable land is divided into two large classes: (1) The irrigated lands, usually in the valleys and in the Highland stretches bordering streams, and (2) the nonirrigated, so-called dry lands on the hillsides and flat plains of the altiplano. Irrigation is rather simple. Generally, each community which has access to water will cut some narrow ditches from the river. These disappear after a short time and must be redug. The battle for water rights goes on incessantly in all parts of Perú. Occasionally, conflicts develop between one community and another, rarely between individuals of the same community. The classic case, however, is community versus hacienda, and the hacienda is generally victorious. Water is drawn off by the hacienda in amounts that leave little for the community, or the course of the river may even be changed altogether.

Rotation of crops is practiced everywhere. In some of the best lands of Cuzco, Puno, and Central Perú, rotation proceeds according to a three-crop system with a reversion to the first crop in the fourth year. Continuous cultivation of this sort is rather uncommon. The usual picture of crop rotation among the *Quechua* includes several fallow years after the planting of a third crop. In various parts of the Department of Cuzco the following rotation has been noted: First year, potatoes; second year, ocas or lisas; third year, barley. The land is then allowed to lie fallow for 3 years, after which potatoes are sown again. On the mountain slopes and hillsides there is usually one crop, potatoes, with 5 to 10 years of soil rest. Arable land which is lying fallow is generally used for pasture. In Kauri, after the barley crop is harvested at the end of the third year, the plots are turned into pasture for the fourth and fifth years. In the sixth year, the plots are entirely unused, grazing being prohibited. On the slopes, the grazing period runs from the second to the fifth year. The sixth year is a year of rest in preparation for the new planting in the seventh year.

Whether he is a tenant of the hacienda or a member of a free community, a *Quechua's* agricultural methods are the same. The basic instrument is the chaquitaclla, a digging stick with a foot-rest and an iron blade. The taclla, an adz-hoe, which consists of a blade of iron held by a simple forked stick, the clod crusher with stone or metal head, a threshing stick, and the sickle are used universally. Plow agriculture is practiced in the valleys and sporadically in all parts of *Quechua* territory, but it is primarily an aspect of Mestizo and hacienda agriculture.

Division and organization of labor.—A *Quechua* work day at plowing time (barbecho) begins at dawn, when the man of the household goes to his plot to meet the members of his work party (masa). These have been notified a few days previously to appear. Then, seated on the ground, the party chews some coca supplied by the owner of the plot. Actual work with the chaquitaclla begins a little later and is interrupted after an hour for another coca chew. Work is then resumed and continues without interruption until noon. Lunch usually consists of chuñu, potatoes, and, sometimes, cheese. The end of the meal is a signal for more coca. At about 2 o'clock, after another hour of work, the party stops to partake of the host's coca. The work day ends at about 5 o'clock, when the members of the work party return to their homes.

Plowing is done by hand, ordinarily in groups of three in which two men break the ground with the chaquitaclla while the third person, a woman or a boy, follows, setting the clods alternately to one side and to the other. A regular rhythm is observed by the men who work with chaquitaclla. The instruments fall in unison; the bodies move together; the foot-rests are leaned on at precisely the same instant. At times the party breaks into song and follows the beat of the music in the digging movements. Other times there will be low talking, jesting, shouting. The two men retreat on a line a half step at a time, lean back and then forward, introduce the blade of the chaquitaclla into the ground, then throw the full weight of the body onto the foot-rest and bear down. As they bring the blade up, pushing the clod of earth forward, the woman grips the clods, turning one to the right and the other to the left. This work of the woman is known as rapay.

The speed of the work is impressive. One line of about 54 yards (50 m.) is plowed in about 22 minutes. After the first row is plowed, a second may be made parallel to the first but at some distance away. After several main vertical rows (orcco) are laid down outlining the limits of the plot, several horizontal rows (cunco) are plowed. The resulting blocks are filled in (huacho), making all varieties of geometric patterns. The crisscrosses of plow lines are especially noticeable in the hill slopes where they serve the very important function of holding the rain water that flows down the slopes. Orccos, cuncos, and huachos constitute a simple engineering device as a substitute for irrigation.

Sowing, like the plowing operation, is a group affair performed typically by groups of three—one handling the seed, the second introducing the pulverized sheep, llama, and cattle manure, which is the only fertilizer used by the *Quechua*, and the third using the chaquitaclla. Weeding and banking, done several times during the year, are performed by one or two persons in each plot. Harvests, again, constitute a more complex affair as regards division of labor, but in many cases must be carried on by individual families all working at the same time. Unwillingness to lend one another labor at harvest time stems from the fact that the agricultural season is closing and every member of the community is anxious to get his crop in as quickly as possible.

The lending of labor in group work to form masas is called working in aine. It is the most significant factor in the division of labor, running through all currents of Andean economic life. The mechanism of working in aine affects every member of the community since everyone must belong to a voluntary work party. Each member of a party, just as he can summon the others to work in his plot, must be ready to lend his labor when it is needed. Working in aine is not restricted to agricultural labor. Women will assist one another in domestic activities on an aine basis. Children who have been given the task of herding sheep in the punas might be relieved by other children who will work in aine. They then may go off to play for the day, offering the same opportunity to their companions at some future time.

Reduced to simplest terms, aine means mutual assistance. It provides for an exchange of labor, man for man and day for day. However, the formalization this system has developed among the *Quechua* calls for close analysis of the manner in which it functions. In an average family plot, which is worked by two masas, or six workers, at least three would normally be working in aine. The household of the ordinary family can supply two or three workers since the wife and boys of 9 or 10 can contribute their labor. Having completed the work of the day, the owner of the plot then owes 1 day of work to the three who have worked in aine. If the four workers in question are able to carry on all their agricultural labors by lending one another their services, then the round of aine is complete. Each party has canceled the labor of the other by his own labor. But in order that the system operate with perfection, as noted in the hypothetical instance just given, it is necessary that the size of the plots of all four workers be more or less equal.

Once there is variation in the size of plots owned by the members of a work party, complications arise. A may require 8, 10, or 15 workers to plow his plot; B may need the assistance of only 2 or 3 workers in addition to the members of his own family; C may have to call only on the assistance of one adult and one minor. Inequality of land holdings together with inequality of labor needs leaves an uneven result when the final balance of labor debits and credits is arrived at. Frequently, the balance has to be equated by payment in cash or in produce. In many places there seems to be an inevitable segregation of work groups in accordance with the size of land holdings, but this is by no means general. The composition of work groups is determined mainly by factors other than the size of plots owned by the members. These are kinship and residence.

With the atomization of land holdings, groups working in aine are much smaller than they had been previously. The few men who have accumulated large land holdings prefer to pay outright for labor. There are visible signs of the disintegration of the aine system.

Division of labor by sex in agricultural activities allows for a full participation of women. Men do the plowing, both with regular plow and digging stick. Most of the threshing of grain is done by men (pl. 94, *bottom*). The rest of the work may be done by women although none of the work is exclusively theirs. Turning the clods at plowing time, the rapay, is usually the work of women or boys. Weeding and banking (allmeo) are as often done by women as by men. In sowing, women may either plant the seed or scatter fertilizer. Harvest work is done equally by men and women. In general, women are given what is considered the light work to do in agriculture; men, the heavy work. However, in settling balances of work in aine, a day of work of a woman is often taken to be equivalent to a workday of a man.

Land tenure.—Crop rotation is equated with the existence of separate lots or sections (suertes) of land distributed in various corners of the community's domain. These suertes are broken up into a series of family plots, so that each family has holdings in several suertes. In some areas, every family possesses a plot in each suerte. But this is not the general case. In Kauri, for example, where there are 6 suertes of land in the pampa coinciding with 6 on the slopes, several families have no hillside land at all. Many own plots in but four or five sections of the pampa. According to Kauri theory, a man should have land in at least six sections—four in the pampa and two on the slopes. This is regarded as the absolute minimum to make ends meet. The size of a suerte varies, but usually they are several kilometers long by several hundred meters wide. A section of this size would be divided into about 100 plots.

Within the larger sections land is set aside for the municipality while other land is worked in the name of a saint. In each district capital, the land of the municipality held in every one of the communities of that district is auctioned off in usufruct to the highest bidder. Often several Mestizos of the town will take over the cultivation of the municipal plots in a particular community which may be distributed in all or most of the different suertes. The proceeds from the rental go to defray the expenses of district administration. A parallel is found to this in the pre-Columbian system of the *Inca* Emperor's lands and, later, the tribute paid the curacas.

The Saint's lands, also, hark back to the Sun's lands. However, the Church receives no direct benefit from the use of these lands. The land is generally worked by two or three Indians who have been appointed to officiate at the fiesta of the saint with whose name the plots are associated. Calling upon the help of the whole community, these religious officers of the year are responsible for the planting and harvesting of the crop grown on the plots. Later, the harvest is used for the feast consumed by the community during the fiesta. Although Saint's lands is a universal institution among the *Quechua* of Perú, I have visited some communities in the vicinity of Cuzco where Saint's lands were not to be found. Apparently, as a result of the shortage of land, these communities have appropriated the Saint's lands to themselves for the use of landless families. Since the Saint's lands are often of sufficient size to provide a livelihood for three or four families, it is not unnatural for Indians in desperate circumstances to flout the authority of the Church in this way. Conceivably, other *Quechua* communities have attempted to relieve the land shortage in a similar way, though other cases have not been recorded.

Practically all arable land in Perú is individually owned today. Usually there is no true ejido, or commons; nor are there pasture commons in many communities. Through a series of historic steps, collective landholdings have been transformed into privately owned plots. In the case of Kauri, the rapid increase of population during the past 75 years has compelled the Indians to divide every bit of land for cultivation, the poorest hillside strips having gone into house, garden, and arable land plots, all individually owned. A sharp increase in the number of livestock, with the resultant competition for pasturage, has removed any vestige of pasture commons. The end result—complete individualization of property in land—has had far reaching effects on the economic organization and social life of the *Quechua*.

The above-mentioned "repartición" of arable land, held about the middle of March, is an important event in Kauri. The geographical distribution of this institution is nowhere recorded, but it is doubtless common to many parts of Perú. Essentially, "repartición" signifies the reaffirmation of the existing land boundaries by the Governor of the district. Settlements of land disputes in the preceding year are put into effect as the Governor calls out the names of the landowners and indicates the boundaries of individual and family plots. New disputes are allowed to arise which are adjudicated later at the district capital. There is probably no connection between repartición of today and the *Inca* reapportionment of land to the family heads.

Considerable pageantry surrounds the formal visit of the Governor to officiate at repartición. The officers of the community prepare a feast beforehand, and a native band parades the grounds on the eve before repartición. The following day the Governor makes his entry in the company of a guard composed of regidores, assistants of the community officers, blowing conch shells. After an elaborate lunch, the Governor, the community officers, and the landowners assemble at the section of land to be dealt with. Before the actual repartición begins, statuettes of the patron saint of the community are brought out to the section. Prayers and coca and chicha offerings are made to the saint. The name of each family head is then called. If he has paid the repartición fee (5 centavos) and has delivered wood to the Government house, the chaquitaclla is struck at the limits of the plot and the boundary marks are made. Usually, the owner of the plot picks up the clods of earth loosened by the chaquitaclla to kiss them.

Frequently, in the course of marking the boundaries, intense quarrels break out over the exact location of certain plot boundaries. The fact that only a few centimeters of land may be involved does in no way lessen the bitterness of the quarrels. Interfamily disputes also occur in which one member of a family will insist upon separate demarcation of his own plot within the family land. It thus appears that arable land is divided into the family-owned lots, the head of the family apportioning an amount to each member in accordance with his needs, for his working, and the individual plots. The latter are separated from the family land by inheritance, on the basis of agreement with the head of the family or by adjudication. The process of individualization of landholdings inevitably tends to split apart the family lands. As each member of the family comes of age, another segment is likely to be broken off. Today even women are asserting their right to an individual plot and are not averse to standing against their families in long litigations.

Statistics on the average size of landholdings and the average yield are unobtainable. There are several different systems of land measurement in vogue among the *Quechua*. The most well known is the topo, or tupu, commented on by Garcilaso (1723, bk. 5, ch. 3). According to Garcilaso, the topo consisted of 1 fanega of land, 1.59 acres, and was sufficient to sustain a man and wife without children. In the

Inca system, for each son the couple was granted another topo and for each daughter, one-half. Today, in the Department of Cuzco, the topo is taken as an inexact measure of land, some 44 yards (40m.) wide by 88 yards (80 m.) long, about 3,782 square yards (3,140 sq. m.). Another measure rather widely used is the cunca, 7 yards (6 m.) wide by 17 yards (15 m.) long. Again, the measure of masa is used, which comprises the amount of land a team of three (two men with digging sticks and a third worker who turns the clods) can plow from sunrise to sundown.

One observer puts the average *Quechua* landholding in the valley of Cuzco at 1 topo of land in maize, 1 topo in potatoes, and, occasionally, a third in wheat (Palma, 1940, p. 541). From my own observations in Kauri, a family plot in one section might average around 65 feet by 200 to 265 feet (about 20 by 60 to 80 m.). Other plots are no larger than a cunca while, in the other extreme, a relatively sizeable plot might measure 265 feet by 265 feet (80 by 80 m.). A brief survey in the District of Ceatcca revealed that the average family landholding amounted to two to three masas per section, that is to say, enough land to provide a day's work for two or three plowing teams.

The average yield is even more difficult to ascertain. Palma (1940, p. 541) generalizes that the average *Quechua* family of Cuzco does not produce more than 4.8 or 6.4 bushels (3 or 4 fanegas) of maize (fanega=1.6 bu.), 38.4 or 51.2 bushels (6 or 8 cargas) of potatoes (carga=4 fanegas), and perhaps 1.6 bushels (1 fanega) of wheat. In Kauri it was noted that the potato yields ran to about 30 llama loads the masa. This community, generally speaking, is far from being prosperous, while, on the other hand, it would not be classed among the most impoverished. Approximate calculations in Kauri would suggest that 20 percent of the families are in a position to produce a surplus for a money market. Half the community live on the margin of subsistence. A final 30 percent are not able to harvest sufficient produce to satisfy their own needs and slowly are being compelled to surrender their tiny holdings to seek a livelihood elsewhere. Population pressure and artificial land shortage have driven large numbers of Indians all over Perú to the cities, to the mines, and to the haciendas as farm laborers and sharecroppers.

Those Indians who find their way to the haciendas to rent land or to seek work as farm laborers are drawn into complex economic relationships, some of which are of pre-Columbian origin. Those who are able to rent a parcel of land in an hacienda on a cash basis retain a certain independence. However, rentals for fixed fees are rare in Perú except in the case of Mestizos and Whites who rent an entire finca or hacienda. In some districts of Cuzco, land rentals for cash are arranged in the following way: A verbal contract is made, renewable each year. The extension of land may be specified, and the rental fee collected at harvest time or at the end of the year. In the valleys, the irrigable plots are carefully measured and rented by the topo. This is not usually the case in the Highlands. The plots are unmeasured, the fees are arbitrary, and no one is quite certain how a proper rental fee may be set.

The reasons for the prejudice against the system of rentals for cash lie in the Colonial fabric of Peruvian agrarian economy. The landlord of Colonial type, who is usually absent from his holdings and has little or nothing to do with the exploitation of his land, prefers to have the Indian not as a free agent but as a farm laborer of one type or another.

The most common rental system is that of payment in services. Four types of service payment are exacted by the hacendados: (1) Working an indefinite number of days in the hacienda fields, (2) working a specified number of days, (3) working out a specified rental fee on the basis of the accepted daily wage, and (4) working when required but with some token compensation in cash (Ponce de León, 1934, pp. 16–17). The first system operates with greatest flexibility. In the District of Quillabamba, Province of La Convención, each tenant may cultivate as much of the hacienda land as he may need,[4] in return for which he works alternate weeks at the hacienda. Similarly, in Paucartambo and Quispicanchis, the Indian tenants in return for their use of the land are responsible for all the work of the hacienda even to depositing the harvest at the hacendado's town house about 62 miles (100 km.) or more distant. Here, rental for service, or yanaconazco, as it is called, includes the obligation of carting the hacienda's products to the market center on the backs of the Indian's own beasts of burden. It further includes service as pongos, house servants, in the master's town house as well as at the hacienda.

The second type of rental for services, working a specified number of days, is not so common as the first . The hacendado, if he can, would rather have the Indian on constant call and select the best work days for service on the hacienda fields. The Indian is then left the days of bad weather or time dangerously late in the season for work in his own plots. The third operates as follows: A piece of land is taken by a tenant whose rental value is set at 20 soles. At a daily wage of 20 centavos, the tenant can work off his rental by giving 100 days' work to the hacienda.

Still another type of rental is practiced, called compañía (metayage), which is most akin to simple sharecropping. The ideal form of compañía, found in Anta, Urumbamba, and in other parts of Perú, permits the tenant to supply the seed, fertilizer, tools, irrigation, and labor, and to apply these to the land of the hacendado, to whom he turns over 50 percent of his crop. Frequently, he must also offer a certain number of work days to his landlord at a substandard wage. In some cases, the landlord supplies the seed. In other cases, Mestizo small landowners actually work along with their Indian tenants, the tenants supplying the seed (Paucartambo and Acomayo).

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[4] The Indian's choice of land is usually restricted to the punas, the infertile hillsides.

Other types of associations of Indian farm laborers with haciendas are known in the country. In the main they are combinations or variations of the basic systems described above. When the *Quechua* is deprived of arable land in the free community, he is put at a disadvantage and native agriculture becomes fraught with sharp political issues.

Agricultural ritual.—Agricultural ritual is highly developed among all *Quechua* (pl. 95, *bottom*). Offerings of coca and liquor (aguardiente) are made periodically to the earth. Dates for planting are guided by phases of the moon, the full moon being regarded as particularly inauspicious. In August, the earth is thought to be alive, and and it is necessary to make coca offerings to protect the people of the community from illness and the crops from destruction. This ceremony, in Kauri, is called Ccoime. The whole family participates. The women select the coca leaves which, after being mixed with incense and llama tallow, are burned. The ash is then buried by one of the men while the others turn their heads away.

Christian ritual plays an important role in protecting the crops against pest and the rigors of climate. Hail is fought off by burning incense and throwing holy water. Against "frost," bonfires are started in the fields. However, it should be noted that many Indians consider the bonfire (cconuy) as a means of engaging the "frost" in physical combat and not of protecting the plants by raising the temperature in their vicinity. For this reason, bonfires frequently aggravate the "frost" rather than give relief. Frequently, the "frost," enraged by the deliberate resistance of the Indians, will destroy everything in the fields.

Worms and beetles and other insects are excommunicated. Numerous legends are associated with the various pests that attack plant life. Frequently, they embody the spirits of men, legendary or real, who have caused injury to the community. For rain, children are sent out to recite the "Misericordia," and to weep at the absence of water and rain. (Cf. Garcilaso, 1723, bk. 4, ch. 3, on sending out children and dogs to make a great din at lunar eclipses.)

Herding.—Few reliable data on the extent and nature of *Quechua* herding are to be found in the literature. From general observation, it appears that the keeping of sheep, llama, and alpaca herds is widespread, though it is only in the higher altitudes that herding becomes a primary activity. In southern Perú, sheep wool and alpaca wool are produced in large quantities to enter the world market. The

Quechua, furthermore, receives a considerable income from urban meat dealers. The Indian himself uses little of his herd to provide food for himself, in most parts of Perú, the normal diet being exceedingly deficient in proteins. A third value which the Indian obtains from his domesticated herds, primarily his llamas, is their use as beasts of burden. The llama is by no means so serviceable a beast of burden as the burro, but for light loads and short hauls he is satisfactory. Cattle are kept in many places but in small numbers. The manure of all domesticated animals is used as fertilizer and fuel.

The type of stock that one ordinarily finds in Indian herds is not of the best. The sheep are small and scrawny, and the wool second rate. The Indian llamas and alpacas are not comparable to the well-kept hacienda herds. The reasons are two: lack of good pasturage and, apart from some minor exceptions, indiscriminate breeding. In most of Perú natural pasturage is used. A little barley and emergency fodder may be given to the herds periodically, but special cultivation of grains for fodder is seldom practiced.

In many communities, communal pasturage is still obtainable, although this is not the case in Kauri. Pasturage is obtained from fields lying fallow, and the herds are kept within the plots belonging to the owners of the herds. Usually, herd owners will rent the plots of others who own no herds for a few bags of manure. A wealthy herder must ultimately seek pasturage in the haciendas. In Kauri, for example, all llamas are pastured in the neighboring haciendas. There, the Indians are given unrestricted pasturage in return for which they must cart on their own llamas a specified number of loads of hacienda produce to a marketing center. The llamas, meanwhile, are looked after by the hacienda Indians. There is also a form of short-term pasturing contract usually made between the Indians of the communities and the hacienda tenants. In this type of subcontract, for every 10 sheep pastured over a 2- or 3-month period the wool of 1 sheep is asked, or, in lieu of wool, a day's work in each week during the time that the sheep are being pastured. The owner always pastures his own sheep under this kind of an agreement.

Herding may be done by anyone. Children 3 or 4 years old, barely able to walk, are put in charge of a flock of ewes with their new-born lambs. The oldest and most decrepit women will take a herd to the punas. Men will herd when they have nothing better to do. The customary herders, however, are women and young people. Herding may be done in aine in the same way as labor is exchanged in agricultural work. When the owner of the herd is busy cultivating his plot, his children assisting him, and his wife occupied with preparation of food for the workers, some person is sought to pasture the herd in aine. The debt, of course, is settled later on by returning the day's herding work, by some wool, or by payment of the standard wage.

Sheep and llamas are kept in separate or in the same corrals beside the houses. Special care is taken with llamas. The pregnant females are separated to protect them against attacks of the males. The llamas are usually marked: the ears are slit, colored tassels may be inserted, and frequently red ocher is rubbed on the animals. These markings are mainly decorative and are used to indicate ownership.

Little or no effort is made to separate strains in breeding animals. However, a great deal of ritual is employed throughout Perú to ensure fertility. In Kauri, it is said that the greater number of lambs are born around San Juan (the 24th of June) and Christmas time. In February, during Carnival, and during the month of August, offerings are made in the form of coca, aguardiente, beans, inchis (peanuts), cupaico, wera ccoya, and canchua, called the quintuichascca. These are buried in the pasture grounds. Moreover, there are special kinds of rocks said to resemble sheep, llamas, and cattle—oveja enccaycho, llama enccaycho, and vaca encaycho. Not every community has these rocks, and the inhabitantsof communities that have not been so favored go to the nearest enccaycho to have the ceremony of quintuichu performed. The ceremony is conducted in Kauri by a diviner, or brujo, for the sum of 20 centavos to 1 sol (1938 prices), according to the number of sheep. The major part of the ceremony consists of divining the will of the mountain spirits and making the offerings in accordance with the orders revealed in the divination. As the offering is made, the spirit is invoked to defend the herds against disease and to protect them against ravages of condors and foxes.

It has been noted that in many regions of Perú llamas are not bred but are brought by traders from the Collao in exchange for chuñu or sold for cash. The reasons are not immediately obvious to the observer. In Quispicanchis, the altitudes are certainly favorable for llama breeding, yet the Indians are loathe to make an effort in this direction. Nearly always, males are bought and the rationalization given refers to the fighting propensities of the llama, especially when he is in mixed company. What does seem to have bearing on this curious fact is that the llama has been reintroduced into southern Perú relatively recently. With the coming of the Spaniard to Perú, the horse was rapidly diffused through the country. In a short time, an acclimated breed was produced, short, shaggy, and hardy enough to withstand the climate of the Andes. The encomiendas and, later, the haciendas possessed large numbers of horses, avoiding the use of llamas. The Indian, however, because of a Colonial edict preventing him from using horses, retained llamas until the Republic permitted him to own and breed horses. Thereafter, many *Quechua* communities took to herding horses in preference to llamas, perhaps because the horse was a prestige animal, perhaps because the horse was a more satisfactory beast of burden, or because depopulation, which had taken place in Colonial times, had left extensive areas for pasturage. In any case, the llama practically disappeared in one region after another. In recent years, horse herding has suffered a set-back. Increase of population, noted above, has put an end to the permanent pastures. Temporary pasture, the fields that lie fallow, have become more abbreviated with the years. Under these conditions, it became impossible to maintain the herds. One might also suspect that the system of requisitioning Indian horses to carry produce for local officials, in vogue some decades ago, would have provided the final straw.

The few cows that are to be found in most communities have no real economic importance. The milk is made into cheese, which is accepted as a desirable addition to the monotonous *Quechua* diet. Nowhere has a native dairy industry grown up.

Pigs are to be found in almost every Indian house. They are not bred in any systematic way but are consumed during fiestas, or the meat is sold in the market. The lard is highly prized and is kept for disposal in the plaza. Guinea pigs are kept by every family for eating at fiestas. In Kauri, the guinea pig has added importance in that the aborted animals are a powerful antidote to sorcery. Chickens are also part of every household. The *Quechua* do not seem to value the eggs as part of their diet, and in the majority of instances the eggs are set for brooding.

The average size of sheep, llama, and alpaca herds varies from region to region. In Kauri, nearly every family possesses a herd of sheep numbering from 20 to 50 or 60 heads, and 4 to 6 llamas. There are at least 10 wealthy herders with herds running from 200 to 300 sheep and more than 40 llamas. Compared to the situation a few decades ago, when over half the community owned no livestock at all, it may be said that Kauri has become pastoralized rather suddenly. Other communities in the Department of Cuzco have experienced the same change. The consequences have already been quite serious for these communities. For, as the livestock increases, pasturage decreases, not only in the arithmetical sense of less acreage per head of livestock but the accompanying increase in population is compelling the transformation of permanent pastures to arable fields. Available pasture within the confines of the free communities is soon exhausted and herders have no alternative except to rent pasturage in the haciendas. These facts in their full significance describe the action of a vicious circle. Pastoralism is more and more resorted to by the *Quechua* as a partial mitigation of the crisis in agriculture. The Indian whose landholding is shrinking finds in the possession of herds a method for maintaining his independent status. In the end, while pastoralism may give the *Quechua* momentary respite at an economic impasse, it may aggravate even more the perennial land question.

Possession of herds puts the *Quechua* into a more direct contact with the money economy and in many places, in the higher altitudes, cash income is primarily obtained from the herds. The price of sheep, llamas, and cattle is everywhere standardized in terms of the local market. Around Ccatcca in 1938, for example, a milch cow is priced at 30 soles; a yearling bull at 15 soles; a llama, 8 soles; a sheep, 1.50 to 2 soles; a sheep gelding, 4 soles.[5]

The functioning of the herding economy can best be exemplified by the transactions of a Kauri sheepherder. In an average herd of 50 sheep, of which 10 are rams, the increase during the first year will be 40 or a few less. In the course of the year, he may sell as many as 10 animals to the Cuzco butchers' representatives. He may, at the same time, use as many as 15 animals himself to add to his food supply and to satisfy his obligations at fiesta time. Moreover, he may lose as many as 10 sheep, ewes, and lambs, as a result of disease and lack of fodder. It is only under very favorable circumstances that he can maintain his herd at the original number.

The sheep are shorn once a year, each animal providing 2 or 3 pounds of wool, sold locally for about 20 centavos. Buyers from Cuzco pay 10 soles for 1 arroba (25 lbs.). Fifty sheep will give enough wool to supply the clothing requirement of the owner and give some 3 arrobas over. The total value of the wool amounts to about 30 soles or may be wholly used in the manufacture of salable textiles. The sheep are usually shorn in March, after carnival, when they are at their best. They are then better able to resist the cold.

Llama wool has little commercial value. The animals are shorn every 2 years, four to six llamas giving 25 pounds (1 arroba) of wool. Sacks and cords are made of the wool; clothing practically never. Aged llamas, after they are no longer able to carry loads, are butchered and the meat is sold in the local market. In many regions, llamas are castrated, but the practice is not very common among the *Quechua*.

Fishing.—Except for the lake and Coastal people, the *Quechua* do little serious fishing. Some of the small river fish are utilized, but most of the fish consumed by the people north of the lake region are of the dried variety, commercially preserved.

Recently, an interesting type of seasonal fishing was noted among the *Quechua* of the Sierra adjoining the Coast of northern and southern Perú. During the slack season in agriculture, many Indians come down from the Andes and fish along the Coast. The Bahía de la Independencia, in the south, is a favorite spot among the visitors. The northern Coast, between Tuijillo and Chiclayo, has been traditionally associated with seasonal fishing by Andean *Quechua*. After a few weeks of primitive fishing, mainly offshore fishing or with balsas, the amateur fishermen collect their catch, hire some conveyance to cart it back to the Sierra, and there sell or distribute it.

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[5] Prices of a few decades ago in the same region have been estimated as follows: Horses at 15 soles; cows, 10 soles; bulls, 4 soles; llamas, 2.40; sheep, 40 to 50 centavos. Thus in spite of the increase of livestock prices have more than doubled, pointing again to the shortage of pasture and the increased cost or risk in herding today.

Food preparation.—Chuñu, dehydrated potatoes, is a staple in the *Quechua* diet. There are two main varieties, the black chuñu and the white. Chuñu negro is made of specially selected potatoes that have been left to freeze on some open, high ground. While the potatoes are in the process of freezing they are sprayed with water periodically, care being taken that they are not exposed to the sun. When the freezing treatment is finished, the potatoes are trampled to extract whatever water is left. After several days of alternate freezing and sun heating they are covered with totora mats or bayeta. The white chuñu is made of a bitter potato which has been left in a lake or river for several weeks until the color has become almost white. Then, after the water has been extracted, the potatoes are put out for the frost to work upon them. Often they are pressed down with rocks. After a few days, the potatoes have been almost entirely dehydrated, the finished product being a white chalky substance.

Dried potatoes are made by first cooking, then cleaning and exposing them to the action of the frost. Maize, wheat, ocas, barley, ullucos, and mashuas are preserved in the same way. Castro Pozo calculates that about 50 percent of locally consumed vegetables and grains are exposed to this treatment (Castro Pozo, 1924, p. 436).

Meat is preserved by salting and drying in the sun. Along the Coast, little preservation is done except by the commercial establishments. The fish are salted and sold in the daily market.

Chuñu, potatoes, and the potato seed are stored in llama-wool sacks, in huts adjoining the living quarters, or in the household. Grain is stored in the same way or is left spread out on the floor of the storage place.

Except at fiesta times, the *Quechua* ordinarily eat two meals a day—at dawn and in the early evening. During plowing and harvesting seasons, the workers are accustomed to receiving a midday lunch. Usually women do the cooking, although men also cook at times. Potatoes, chuñu, and grains are boiled and served in stews (chupe). Meats are roasted on spits or fried. In the Highlands, food is frequently cooked over fires made of manure. Wood fires are more common in the lower altitudes.

Bread is a staple only in restricted areas or is eaten on special occasions. In the Punas of Quispicanchis and Paucartambo all the bread is brought in from the outside. The local Indians have no recipes for making bread. Cheese, of cow's, ewe's, and goat's milk, is made in most *Quechua* communities. In many places, it is an essential part of the diet.

MANUFACTURES

Cordage.—The making of cordage is a highly developed native industry, especially in northern Perú. The maguey plant is primarily utilized in this industry, known locally as chachual. The vegetable fiber is extracted in the following way: The leaves of the plant are cut and soaked in water until the pulp has rotted. By another technique, the fibers are freed after beating the plant against a stone. The fibers, called cabuya, are plaited in three to five strands, the first flattened while the rest are rounded. Cable made in this way is extremely resistent and durable (Castro Pozo, 1924, p. 452). The cordage industry is practiced in Piura, Cajamarca, parts of Amazonas, Huánuco, Ancash, Junín, Ayacucho, Arequipa, Apurímac, Aczo, and Piura. Sacks for local use are also made of maguey fiber.

Another type of rope is made of llama and alpaca wool.

Basketry.—Basketry is made sporadically in Perú, the larger part of the production being concentrated on the North Coast. It is mostly of the coiled variety, made of various materials among which corbatana is one of the most popular.

Weaving.—Perhaps the most important of all *Quechua* industries is weaving (pl. 97). Textiles are woven of cotton and llama, alpaca, and sheep's wool in a wide variety of designs. Several types of looms are used but the most popular are the belt loom and the horizontal peg loom. The Spanish machanical loom is used widely to make bayeta.

Everyone spins—men, women, and children. After shearing, the wool is spun on a spindle consisting of a wooden shaft, with the whorl made of wood or pottery.

The horizontal and belt looms are pegged out horizontally. The technique consists of maintaining a continuous warp system which is slipped around the cloth and beams. The shed stick is usually made of wood. The shuttle stick is much slimmer and is used for winding the weft. After shooting the weft, the shed is pulled down and the weft is flattened by a wood or bone awl. The heddle is then raised and the shed is changed.

Fancy edging, about two-thirds of an inch (2 cm.) in width, called buyto in many places, and used for decorating skirts, llicllas, and ponchos, is manufactured on a special small loom.

Dyeing is done immediately after spinning. Today, the use of mineral and vegetable dyes is preserved in only a few regions of Perú. The majority use aniline dyes exclusively. Ponchos are dyed in solid colors, in stripes or in triangular designs. Vicuña ponchos are never carded and are rarely dyed. Ordinary bayeta comes mainly in the natural shade or in stripes, checks, and a hound's-tooth pattern.

Although in many communities most of the members weave both for their own needs and for sale, experts in weaving and dyeing who dedicate the greater part of their time to the arts are known everywhere. The experts are called upon for their services just as often by the people of their own community as by retailers who sell their products in the markets. Some women are known to do exceptionally fine spinning. Some men are famous for the pleasing designs of their ponchos and others are expert dyers. In Ccatcca some men were considered experts in dyeing in one shade, so that there were those who were famous for their reds, and others who were professional violet dyers.

Woodwork.—Woodwork is characteristic of Central Perú. Castro Pozo (1924, p. 456) gives the following distribution for the making of wooden plates, spoons, ladles, etc.: The provinces of Santiago de Chuco, Cajabamba, Chachapoyas, Marañón, Huari, Huaráz, Pallasca, Pomabamba, Jauja, Tarma, Huancayo, Abancay, Urubamba, and Chumbivilcas. The plates are crudely made of soft wood. The spoons and ladles are often decorated at the handles with figures of flowers, plants, animals, and birds. In Tarma, fine novelty boxes are made in Spanish style with inlaid designs. A great variety of rare Montaña woods are employed.

A flourishing furniture industry exists in the larger towns. The carpenters and cabinet makers mainly are *Quechua*.

Totora products.—Totora reed, a vital plant for the fishing people of the lake and Coast regions, grows wild in the swampy regions of the country. In some places along the Peruvian Coast, totora is cultivated. The famous fishing balsa, the caballito, used commonly between Chimbote and San José (north of Eten) is the most notable totora product. It is used also in the making of mats. In some of the more ancient Coastal fishing villages the walls of the houses are formed by totora mats (Mishkin, ms.).

The totora industry is also highly developed in the lake region. Some furniture of totora is made.

Hat manufacture.—Hat making is an important industry in both northern and southern Perú. The Panama type made of paja toquilla is woven in Catacaos, Cajabamba, Celedín, Jangas, and Tarica. The fiber is carefully separated from the palm, locally called bombonaje, and is continuously moistened in the weaving. This style of hat has been made since the Colonial Period, especially around Catacaos, according to Leguia y Martinez, who asserts that "men and women, the old and the young, all weave hats when they are not carrying on their agricultural work." (Quoted in Castro Pozo, 1924, p. 469.) Around Chiclayo, in nearly all the fishing villages as well as in the agricultural communities, hats are made the whole year around. However, these hats, the manufacture of which is centered in Monsefú, Santa Rosa, Eten, etc., are made of a different material, paja de macora. A third type, known as junco hats, is woven in the same region.

Wool hats are made in various parts of the Sierra, known under the generic name of monteras. The form varies considerably but all are of Colonial origin.

Pottery.—The pottery industry, although highly developed among the *Quechua*, is fairly localized. According to Castro Pozo, pottery is made in Sochabamba and Olleros, in Ayavaca and Huancabamba; Mórrope in Lambayeque; Mollepata in Santiago de Chuco; Cajabamba, Huancas, and Sonche in Chachapoyas; Piura in Marañón; Pampas, Jangas, Tarica, Recuay Pampa, and Pariahuanca in Huaráz; Llapo and Puyalli in Pallasca; Zaquia, Acopalca, Yocya, Mallas, Colquicancha, Vilcabamba, Pampas, and Chinlla in Huari; Pomabamba, Mitu, Muqui, Comas, and Pachascucho in Jauja; Sacsamarca in Fajardo; Huayllaca in La Mar; Huayhuas in Huanta; Huasicaray, Talavera, San Gerónimo, and Pampachun in Abancay; Altos Andaroy in Condesuyos; Racchechi in Urubamba; Colquemarca and Santo Tomas in Chumbivilcas; Ccepa, Angará, Pacacce, and Pucara in Lampa (Castro Pozo, 1924, p. 489).

The most common forms include ollas, bowls, dishes, cups, small and large jugs, basins, trays, and the purely decorative pieces in animal and human representations. Both men and women make pottery, but the majority of potters are men.

Various types of clay are used, depending on what is locally available, mixed with water. Sand is the most common tempering medium. Generally, the walls of the vessel are built onto a flat or concave disk in concentric fillets. A wet cloth and scraping instruments are applied to smooth the surface of the vessel. After drying, the slip is put on and the vessel is painted. In southern Perú as well as in central Perú, the usual colors are red and white on orange or buff. Firing is often done in special ovens or manure fires. A large part of the pottery produced is unpainted.

Some pottery is made in molds. In this connection, the production of large quantities of black ware, *Chimu* pottery, on the Coast deserves special mention.

Roof tiles and bricks.—Roof tiles are produced by the thousands around Pucara, and in other regions on a smaller scale. The technique is simple. The clay is turned for 8 to 12 hours, and then is put into convex molds, which are baked in specially constructed ovens. Bricks are still made for church construction in a few centers.

Gourds.—Central Perú, especially Ayacucho, Huancayo, and the North Coast, are centers of the gourd industry. The finest gourds, incised in a two-color cameo technique, come from Ayacucho. These show minutely worked scenes from domestic life, complete panoramas of fiestas, historic incidents, etc. In some cases, the art has been handed down within a single family since the early days of the Republic. For example, the Flores family in central Ayacucho (Huanta) have been famous makers of gourd vessels probably since the 1840's.

In Piura, the gourds are colored a yellow buff by polishing with fragments of glass and oiling. The incised figures are crude and frequently the design is scratched directly on the surface of the gourd. Some of the Huancayo gourds, although they are imperfectly dyed and the figures crudely incised, are most artistic in conception and bold in design. In the long calabashes, a common practice is to elongate the figures to conform with the shape of the plant.

Mining and metalwork.—In modern times, numerous *Quechua* wash alluvial gold in the streams of the eastern slope of the Andes. Many of these are hacienda Indians, as, for example, in the region of Ocongate, who collect gold dust for the landlords for some token remuneration.

Working in silver and copper is most highly developed in central and southern Perú. Pins, earrings, buckles, rings, and brooches are the most popular forms of metal objects. During the past few years, the best artisans have migrated to Lima to work in large commercial establishments. Production is being quickly transformed to meet the demands of the urban purchasers and the tourist trade.

Miscellaneous.—Numerous other industries are found among the Peruvian *Quechua:* tanning, shoemaking, milling, etc. Essentially, the articles produced by native industry are for native use and enter into the native channels of trade. The standard of workmanship is high in most cases, yet there is little development of a professional spirit. Although differences in skill among producers are noted and appreciated, few experts in any of the native industries mentioned above devote full time to their chosen industry. In practically every case, agriculture or herding comes first; everything else is an avocation.

TRADE, MARKETS, AND LABOR

Trade.—Specialization in agricultural production as well as in handicraft and manufactured goods is characteristic of the entire *Quechua* community. Potatoes, chuño, barley, etc., are products which belong essentially to the high altitudes. Coca, peppers, and fruits are cultivated in the valleys and lowlands. There are communities such as in Lambayeque and Piura which specialize in the manufacture of hats. Pucara, Department of Puno, is a center of pottery and tiles. Huertas is a shoemaking center. A firm basis exists everywhere for interchange of specialized production although few communities are entirely dependent on trade for gaining a livelihood.

The professional traders in Perú are the Indians from the Collao. These itinerant peddlers of hats, analine dyes, native medicines, llamas, etc., are famous throughout Perú and Bolivia. They not only fulfill an economic need; they perform an educational function as well. New ideas and news of events are carried from one community to another along with the trade items. In many cases, especially before the new highways in Perú were completed, the Collao traders served as the principal means of communication between one community and another. In many communities, they have been given formal status as compadres and on their annual visits are taken in as if they were long-lost relatives.

Among the Indians who dedicate themselves entirely to trading are the few in every community who have been dispossessed of their land or who have found a profitable type of enterprise worthy of their full attention. Many of these traders are merely go-betweens carrying the potatoes or chuñu of others to the valleys where they trade for maize. In this sort of transaction, no investment is made by the trader except his time and the cost of the journey. His risk is minor and his profit is proportionately small. Other traders are entrepreneurs in their own right, purchasing goods in one place and selling them in another. Even in this case the profits are ridiculously humble. A *Quechua* from southern Cuzco will tramp hundreds of kilometers to the eastern slope of the Andes to purchase a few sacks of rocotos and sell them in his own community at a profit of a few soles. Trade routes run mainly east and west and up and down, that is to say, between valley and Highland. Products of the high Andes are exchanged for products of the valleys and the Montaña.

In recent years, the creation of cross-Andean highways connecting local and departmental roads with large urban centers has revolutionized *Quechua* trading. Indian products are finding their way to distant markets, reaching their destination swiftly by motor transport, and bring higher prices than were ever known before. *Quechua* agriculture is inevitably breaking through the barrier of its self-sufficiency and the isolation imposed on it by poor communications. According to preliminary reports received (1941–42) wages and agricultural income have doubled in some parts of Ayacucho, Apurimac, and Cuzco. The full economic, political, and social consequences of improved communications are bound to be far-reaching even in the near future.

Large-scale trading is done mainly by men. The majority of itinerant peddlers are men, although one sees women, usually Mestizos, along the Coast and in central Perú, carrying their wares from one town to another. Women participate quite as actively in commerce as men, but whereas men are the entrepreneurs, dealers in wholesale, women almost exclusively handle the retail trade. At least 95 percent of the market stands in the plazas are run by women.

Markets.—The market is still a fundamental institution in *Quechua* territory. Throughout the Andean republics, an Indian market is held once a week or more frequently in the capital of each district and in the urban centers. In the case of the towns, permanent daily markets are held, but these are in the hands of Mestizo traders and established merchants. The normal *Quechua* market scene of a Sunday in the plaza of any district capital is spectacular if not animated. Several hundred vendors sit before their merchandise spread out over a poncho, or lliclla, on the ground. A goodly sized crowd of purchasers will number in the thousands. The market is vaguely departmentalized in most places. Bread vendors tend to congregate at one place in the plaza; meat vendors at another; Mestizos selling coca will select their own particular corner. But departmentalization is not strictly adhered to; at one place in the plaza, an extraordinary mixture of products is arrayed side by side, so that the purchaser is able to fill his sack with onions, bananas, a hat, dyes, and potatoes without moving more than a few paces in any direction. Moreover, on the following Sunday, whatever patterning of market stands exists may be spatially rearranged. Where coca was found before, meat is being sold. The places for textile products have been usurped by the pepper vendors.

Characteristic of *Quechua* trade in the market place is the pettiness of the transactions and the vendor's lack of diversified goods. Only the Mestizos display a variety of merchandise and a respectable quantity of it in their stands. They, of course, are professional traders whose full-time occupation it is to purchase goods wholesale, and sell in retail. The Indian customarily has merely the surplus of his own agricultural production or a few handicraft articles he has been able to make in his spare time. Basically, the Indian is exchanging a part of his own production for a part of the production of another Indian. The two are merely increasing the variety of goods each will use, and this is most frequently achieved without reference to a middleman or to the money economy.

Thus, in the plaza, it is often difficult to perceive who is the buyer and who the seller, since both are on equal terms. One woman sits before a tiny mound of potatoes; another, facing her, has opened a napkin containing a few ears of corn. There is silence and concentration as one studies the goods of the other. In a minute or two an agreement has been reached. The amounts to be bartered are pushed forward, yapa (overweight), is requested, and the transaction is completed.

In every market there is made available locally produced goods and goods brought in from the outside. This division of two types of goods corresponds roughly to what is bartered and what is sold for cash. Certain articles, however, are practically always sold for cash, such as coca, aniline dyes, hats, textiles, etc. In the high altitudes, rocotos, fruits of all sorts, and other valley products bring cash whether they are being sold by local entrepreneurs or by outside vendors. Similarly, cash is preferred for typical high-altitude products sold in the valley, although there are exceptions.

In most of Perú, the largest trade item involved in the money economy is coca. Coca is everywhere a staple and during the plowing and harvesting seasons is consumed in great quantities. Every owner of a plot of ground must distribute coca among his helpers. In addition, the Indian is accustomed to taking a greater amount of coca when he is engaged in strenuous physical labor. Hence, all *Quechua*, no matter how difficult it is for them to make cash expenditures, must spend a material portion of their cash income for coca. The coca section of any market is usually the center of the greatest activity. The dried leaves are sold in any quantity from handfuls to arrobas. In this connection, a unique type of purchase for coca, found in several districts of Cuzco, may be prevalent elsewhere in Perú. Indians may band together to make a collective purchase; a few members of a single family may thus buy a whole arroba of coca in equal shares; or as many as 30 or 40 members of a community may form a kind of consumers cooperative, each person subscribing to the amount he desires and receiving the proportion of the purchase due him. One man is chosen as the buyer, whose function it is to divide the coca in accordance with the number of shares each has taken. By collective purchases, the Indians are able to gain the slight advantage that is offered in bulk buying. The buyers, however, are in no way organized in formal unions. Frequently, several individual buyers will join together on the spur of the moment to conclude a collective purchase.

Labor.—Throughout post-Columbian history, the *Quechua* have provided a large part of the industrial labor force of the Andean countries. In Colonial times, the mines and textile establishments were operated with Indian labor exclusively. Since the Republican era, as the *Quechua* have lost their land they have come to depend increasingly on town and mine work for a livelihood. The past few decades have witnessed large-scale migrations from rural to urban areas. Lima and other cities have undergone phenomenal growth during this period. But on the reverse side of the picture, there are many areas of central and northern Perú which are entirely uninhabited. Either willingly or by compulsion whole communities have abandoned their fractioned landholdings and have moved off to the towns.

On the one hand, the mines which pay a relatively high wage attract a certain percentage. The majority go to the towns where they become artisans, factory workers, unskilled laborers, and domestic servants. These detribalized *Quechua* soon learn Spanish, are delighted with the educational opportunities offered in the towns, and adapt themselves to the new life with great speed. They acquire the manner of life, the interests, and characteristics of the Mestizo, and in short order become indistinguishable from the town Mestizo population. A number return to their villages in the Provinces, but these are usually young domestics who have saved a little salary to buy a piece of land and cultivate it in Mestizo fashion. Very few, indeed, take up the life they left in their home communities. It is a great misfortune that practically no statistics are available on rural-urban migrations in Perú, and one can only regret the absence of any serious study of *Quechua* urban populations to investigate the acculturation process that is taking place.

There are temporary as well as permanent *Quechua* exoduses. Castro Pozo (1924, pp. 100–105) points out that after October and November in Northern Perú, August in Central Perú, and November in the South, a large number of Indian agriculturists leave their communities for work in the mines and the industrialized Coastal centers. Whole communities move en masse, leaving the old people and youth to carry on the work of plowing. After completing a short-term contract, the migratory workers return home.

DRESS AND ORNAMENTS

Dress.—Clothing fashions differ widely from region to region. Cuzco men wear a short jacket and knee pants of homespun, a montera with a wide brim and shallow crown, faced with red felt or homespun and black velvet. The women wear a number of short skirts, the colored edging of each being visible. The majority go barefooted or wear sandals of leather or of rubber tires. Shoes are customarily worn by officers of the community at Sunday Mass and for special occasions, such as fiestas.

Headgear is especially elegant in southern Perú and is worn over knitted caps called chullos. A common type of montera in Puno comes in a bicorn form which is said to be of Portuguese origin (Romero, E., 1928, p. 202). The men of Puno usually wear homespun suits of more modern cut with long trousers. The women wear a felt derby. In Cuzco, the derby is the mark of a Mestizo woman.

What is typical Mestizo dress in one region becomes Indian dress in another, and vice versa. For example, the dress of a Mestizo woman of Cuzco with derby, and long, full skirts worn over several underskirts, is a typical costume of the Indian women of Ayacucho. In some places, cotton and rayon are replacing wool so rapidly that it is no longer possible to identify one as Indian and the others as Mestizo materials.

Ornaments.—Clothing ornaments mainly of metal are widely used. The spoon-shaped pin is used to clasp the ends of the lliclla or to adorn the blouse of the dress. Earrings, brooches, and rings of copper and silver are worn on Sundays and on fiesta days. Necklaces of huayruros, various types of shell, coins (5-, 10-, and 20-centavo pieces), stone, and bone are worn by most *Quechua* women. Some of the necklaces are made in a series of rows to form a diadem which is worn from the neck to the breast. The brooches represent turkeys, condors, llamas with loads, and human figures. Well-dressed men of Cuzco are also loaded down at fiesta time with clothing ornaments consisting of silver chains, pins, buckles, etc.

Metal bracelets are not worn. Their place is taken by wrist and ankle ornaments made of wool and woven in bright colors.

VILLAGES AND PATTERN OF SETTLEMENT

Villages.—Broadly speaking, four basic patterns of settlement are found throughout the whole Andean region: (1) The dispersed or open community, in which each family occupies a house in the midst of its cultivable land. The houses may be relatively closely grouped or may be a quarter of a kilometer or more apart. (2) The "nucleated" community, which is a true village from which the people go out to their fields. (3) The third type of settlement, which is, in reality, a combination of the first two. One part of the community may be concentrated at one end of the community lands, while the rest of the inhabitants reside in houses, separated and widely dispersed over a large section of the community lands. (4) The towns, the majority of which are of Spanish origin. By origin, the *Quechua* towns are actually a merging of several distinct communities.

Precisely which type is the aboriginal form of community is impossible to say. Type 1, the dispersed community, is certainly an ancient form, pre-*Inca*, and one obviously indigenous to the high altitudes, where it predominates today. Type 2, the "nucleated" village, is more commonly to be seen in the valleys and in the more fertile lands at lower altitudes. This, doubtless, was the case in early times. Type 3, again, is principally found in the punas, although it is common at low altitudes also. The towns, type 4, are scattered throughout the punas, but mainly belong to a valley type of organization. From historical evidence and logical analysis, one is led to conclude that all four types were present in *Inca* times and all are, perhaps, even of earlier origin.

Most of the towns are centers of Mestizo population. However, in the punas, district capitals are located in what are almost purely Indian towns, such as Ccatcca and Ocongate, in Quispicanchis. Even the town of Paucartambo, the capital of a subprefecture, contains a large number of *Quechua*. On the other hand, the majority of towns in central and northern Perú are seldom permanently inhabited by Indians.

The center of town activities is the plaza, a stretch of pampa in the nucleated villages. There may be several plazas in the larger towns into which a system of narrow, winding streets leads. Houses and house compounds, usually of sod blocks, line the street on both sides. The typical plaza varies little from the Colonial pattern: on one side stands the church and vicarage; on the other, the government offices, municipal, district, or prefectural. Between them are Mestizo residences, general stores, and taverns where chicha and aguardiente are sold. On Sundays, or on fiesta days, the plaza is crowded with the market throng, spectators and worshipers. On special occasions, the plaza is roped in for bullfights. The pampa or plaza of the village also has its church, but little community life is centered around it.

Houses.—The most common house construction is rectangular or nearly square in form, with a gabled roof (pl. 96, *top*, *left*). Trapezoidal roofs are also found. Most families build their houses in compounds enclosing a little patio. The main room constitutes the living quarters for the family nucleus. Other rooms may be used for storehouses or for living quarters of the younger branches of the family. The dimensions of the rooms vary but are generally small. There are no partitions within the houses, each house being a single room, windowless, with floors of pounded earth. Kitchens are little houses standing apart or built against the main house.

In Kauri, a new house is constructed for each married couple unless they can be accommodated in one of the rooms of the old compound. The new house is built by four or five men, relatives for the most part, working in aine (see p. 419) or being compensated by a daily wage of 20 to 40 centavos. The first operation is laying the foundations. Holes are dug and foundation stones are obtained on the hillsides. Before inserting the corner stones, a sacrifice must be made to the earth mother in the form of coca leaves, liquor, and chicha. The coca leaves are concealed under the four foundation corner stones; chicha and liquor are spilled over the building ground, and the owner kisses the earth. Then the stones are piled, the larger ones at the bottom, smaller stones next, and above, the adobes. A second work group takes charge of obtaining the sod and preparing the adobes. An expert is sought to lay the blocks. The construction of a Kauri one-room house, about 15 feet by 35 feet (4 m. by 10 m.), takes several months to complete. The work proceeds slowly. A week is spent collecting stones. Three or four days are spent in making the adobes, which are left to dry during another 20 days. Several more days are needed for the thatching. In the meantime, work must be interrupted by the common necessity of carrying on the agricultural labors. The cost of a one-room house in Kauri is calculated at about 40 to 50 soles.

In some regions, the doors and façade are decorated with carved representations of the national coat of arms, animals, and scenes from daily life (Castro Pozo, 1924, p. 74). In central Perú, nearly every house has an adornment on the front of the roof—wooden crucifixes or religious symbols showing oxen, llamas, birds, etc., wrought in iron.

Household furniture.—Household furniture is exceedingly simple or absent entirely. Chairs and tables are seldom seen. Pirca platforms stand at the walls of the house on which llama and sheep pelts are placed. These serve as sitting and sleeping places. Usually, niches are to be found at the gabled ends of the house, and household articles are hung from roof posts or from projections of the walls.

SOCIAL AND POLITICAL ORGANIZATION

The community.—In speaking of the basic unit of *Quechua* society, the term community is preferable to the use of that mysterious, almost unidentifiable concept—the ayllu. Peruvianists have, since the Conquest, given to the term ayllu significance that is at least contradictory and confused. Moreover, it is rather likely that the term, in its original *Quechua* usage, was applied loosely to blood groupings of various sorts and to territorial units as well. Today, the term is often used synonymously with comunidad and applied to the typical village community.

Among the modern *Quechua*, the ayllu, as described by Saavedra, with the classic sib characteristics of descent from a common ancestor, unilaterality, exogamy, and totemism, is nowhere to be found. Castro Pozo has pointed out the existence of communities in Junín, Huancavelica, Apurímac, and Cuzco in which all the inhabitants bear the same surname (Castro Pozo, 1924, p. 12). This, however, does not signify the presence of a sib organization by any means. The community in most of Perú is composed of at least several extended family groups, each of which affirms its separate origin despite the fact that they have lived in close association for long periods.

The names and sites of many communities date from pre-Columbian times. Others were formed from the reductions of the Colony. Still others were artificially created since the Republican era. The rapid increase in population during the past century as an aftermath to the extreme depopulation occurring in Colonial times accounted for some movement of population; communities that had been decimated by disease, forced labor, and military service were joined by new members. These foreign families soon adapted themselves to the ways and life of the communities they had become part of, were accepted and assimilated. Hence, in many *Quechua* villages today there is a nucleus of families who take pride in their status as original members while others are regarded as newcomers. The loyalty of the newcomers is not suspect, nor is there any discrimination practiced against them. There is rather a subtle social distinction maintained between the two components of the community.

The normal-functioning *Quechua* community exhibits strong group feeling. Defense of community lands against encroachments of the hacienda is a rallying point for all the inhabitants. Even with growing individualization in the ownership of land, the loss of land by one member of the community is still regarded as a community calamity. The whole group feels weakened thereby and considers its future security endangered. In addition, the various family units which make up the community are united by kinship ties resulting from intermarriage. These ties exercise considerable weight in fortifying the common economic interests of the group. Cooperation in the performance of many day-to-day tasks, discussed above under the heading of aine (p. 419), further adds to group cohesion. Religious expression in the fiestas and in the practice of magic ritual not only requires group participation but reveals, as well, a sense of community responsibility.

It is only when the community has been completely disrupted by outside economic pressures that this characteristic solidarity disappears. In North Perú, and in the Departments of Cuzco and Puno, the process of land diminution is reaching the stage which threatens the existence of the community itself. The communities are no longer able to unite for defense. Then, kinship obligations begin to break down. The landholdings are so reduced in size that mutual assistance to work them is no longer necessary. Poverty compels the inhabitants to put an end to a great deal of ceremonialism; social life is neglected. In the end, the political structure of the community becomes functionless, and those who still retain their land reside on it as individual farmers unconnected with any social unit.

In some places, however, a new process of integration is manifest. Individual farmers in central Perú have banded together to found communities as a means of defense against the haciendas. These new communities, which are usually incorporated, have little in common with the traditional *Quechua* community. They are sophisticated unions created to take advantage of their legal status. There is also the case of Muquiyanyo (Castro Pozo, 1924, pp. 63–68), which has developed a modern cooperative organization both of the consumer and producer type, offering credit facilities to its members.

The *Quechua* community usually tends to be endogamous. Where marrying out of the community occurs, residence is likely to be patrilocal. Endogamy is, of course, a highly desirable institution for agriculturists living in constant fear of losing their land, or of being invaded by outsiders who will further diminish the extent of available land. Marrying within the community gives security. The family holdings are maintained intact and strangers qualified to inherit do not appear in the community. In Kauri, today, there are only two outside men who have married into local families. Although both have lived in the community for more than 20 years, their presence is still resented. They are referred to, in insult, as men without a place.

The stranger is feared and hated. The entire community seems as if it is ready to contract and recoil in the face of any outsider attempting to work his way into the community. Anyone selling his plot of land to the stranger is considered almost a criminal. But such an event seldom comes to pass. The stranger realizes that he can gain little and risks a great deal if he attempts to work land in a community not his own. He will not receive assistance for work in the fields; no one will work in aine with him. He will be socially ostracized. Worst of all, every sorcerer (pl. 98, *bottom, right*) in the community will practice the black art against him. This is the community's culminating attack on the stranger in their midst. In the Kauri case, both men who had come to settle with their wives complained bitterly of sorcery attacks from which they had suffered great distress.

The presence of moieties in present-day *Quechua* communities is questionable.[6] Many communities are divided into two or more sections, frequently bearing names that signify "upper" and "lower" towns. (See this volume, p. 225, for aboriginal divisions.) These as well as other designations seem to have geographical significance only.

Political Organization.—The origin of present-day *Quechua* political organization is usually sought in the structure of the pre-Columbian community. Pastor Ordoñez, author of an authoritative work on the Varayocc, or envarados, bearers of the staff of political office in the community, asserts that the institution is distinctively indigenous. A fact in favor of this view is the absence of any legislation giving formal recognition to the Varayocc organization. It may be said, on the other side, that the titles of the *Quechua* officers are exclusively Spanish in distinction to the title of Hilacata which still persists among the *Aymara*. Moreover, the functions of the *Quechua* officers parallel closely those of the Spanish village officialdom in the 16th and 17th centuries. Spanish influence cannot be discounted. But, although the Varayocc may not be the exact counterpart of their *Inca* predecessors, neither are they wholly identical with their Spanish namesakes. Historic factors transforming the *Quechua* community itself have also given a unique character to the political organization.

The titles of the community's official hierarchy include the alcalde, alguacil, segunda, and regidores. Some places lack the office of alguacil. In other places the office of mandón is added to the list. The alcalde stands at the top of the hierarchy. Although subordinate to the Governor of the district, he is often permitted to exercise considerable authority in his own right. He determines when agricultural labors are to be begun, arranges that the faenas (the compulsory labor on public works, road building, sanitation, etc.) be performed, maintains public order, judges some disputes, determines those that are to be brought to the attention of the governor, and may meet in council with other alcaldes of the region. The alcaldes of the province of Anta (Cuzco) some years ago fitted into a single hierarchy and were grouped in accordance with the extent of their power. Above the alcaldes of communities were the town alcaldes, who served previously as alcaldes of the lower category. The highest alcalde, the elacta alcalde, was the mayor of the capital of the province (Pastor Ordoñez, 1919, 1:34.)

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[6] *Aymara* moieties are described in this volume (p. 541).

The alguaciles are essentially executive officers to the alcaldes. They transmit the orders of the alcalde to the inhabitants of the village and announce the days of the faenas. They see to it that each family has its quota of members on hand for the performance of the faenas. They are responsible for the execution of the alcalde's orders. Where the office of alguacil is not present, this function is exercised by the segunda or mandón, or both. The segunda, or segundo alcalde, is normally an honorific post which may be held by an ex-alcalde or by a future candidate for the alcaldeship. In the region of Acomayo, there are mandones and campos who represent the alcaldes in the isolated segments of the community apart from the main settlement. The mandón in Kauri has approximately the same status as the segunda. One of his duties, here, is to feed the workers in the faenas. He is also responsible for preparing the feast at the land repartición.

In addition to the higher functionaries of the community, the regidores form a secondary branch of community officialdom. These young men are, in part, adjutants of the alcalde and his executive officers. They serve as guards and police, and execute the orders of the alcalde. However, they participate with the rank and file of the village in the faenas. At Masses, fiestas, and on official occasions the regidores form part of the alcalde's entourage, wearing shoes and all bearing their staffs.

The staff (vara) is a badge of office, as it was both in *Inca* Perú and in Spain. The finer staffs in modern Perú are highly decorative with the upper part in silver and covered with crucifixes and portraits of saints in repoussé. Religious medals are attached to the thick part at the top by silver chains. The end comes to a sharp point made of iron. These varas possess some religious significance, but precisely what is unclear. It may be, as some writers have suggested, that since the original *Inca* vara was adorned with idols and magical paraphenalia of various sorts, by a simple substitution, after the Conquest, Christian symbolism replaced the former pagan trimmings. Whether or not this be the case, it will be shown that the political offices themselves have religious associations which, in turn, may be expressed in the decorations of the varas.

The varas are apparently regarded with veneration. The officers guard them carefully, and it is fair to assume that something more than mere material value influences the Varayocc's feeling for their staffs. A great deal of variation is found in the size of the vara. The varas of the regidores are relatively short and simple. Until a generation ago, the regidores of Kauri used roughly cut sticks. The alcalde's office is dignified with the long, elaborately decorated vara, although some alcaldes wield a small baton poorly trimmed in tin and iron. The size and decoration of the varas of higher functionaries are not correlated with the extent of their authority. In Quispicanchis and Paucartambo, for example, where the alcaldeship has lost all dignity and importance, the varas of alcaldes are imposing in their richness.

The Varayocc are elected by an informal council of the older people of the community summoned to the capital of the district by the Governor. The electorate selects the officers from among the eligible candidates and submits its nominations to the Governor. In practically all cases, these nominations constitute election. In Kauri, at the end of the fiesta of San Rosario, the older men and women discuss the matter of nominations rather casually. There are, after all, few eligible candidates for the alcaldeship. Frequently, the man who has just completed his service as mayordomo of the fiesta of Rosario is automatically selected. The segunda and mandón are then named. Little time is given to the selection of the regidores, since this is one of the first functions of the alcalde. Immediately after the alcalde is elected he appears before the Governor and is asked the names of the regidores. He recites the names of a previously prepared list. Once the new set of officers has been registered by the Governor, they proceed to the capital of the Province and are sworn in by the subprefect, pay a small fee, and receive the vara. On returning to their district, they are met by the Indian populace and a native band. Chicha is passed around, the Varayocc may by showered with flowers, and the alcalde returns to his community followed by his subordinates.

If the Indian who has been nominated for the alcaldeship wishes to decline the nomination he must face the displeasure of the Governor, the priest, and his own people. Usually he is unable to resist the pressure brought to bear against him, but some nominees have been known to assert their legal right not to serve. When an alcalde dies, the electorate of the community chooses a new man to fill his place and the Governor of the district formalizes the selection.

As has already been intimated, the primary qualifications for election to the alcaldeship is full participation in the religious life of the community. The candidate must, from childhood, have taken part in the yearly round of fiestas. He must have been mayordomo of the major fiestas and after having taken the lead at Santiago and Rosario, in Kauri, he may culminate his career with serving as alcalde. In the meantime, he has already gained experience in the lower branches of political office as regidor, alguacil, or as segunda and mandón.

In some *Quechua* areas, the functions of the community political officers have gradually grown less important with the years. The alcaldes have been deprived of all responsibilities. The Governor of the district intervenes in all the affairs of the community. In these communities the Varayocc are mere messengers and agents of the Governor without any independence of action. Even minor quarrels that break out in the community must be settled by the Governor. Consequently, political office is deemed undesirable and unworthy, and is not sought by the most able. Indeed, the alcaldes have, in these communities, become so much the creatures of the Governor that they are completely distrusted by their fellows. It is easily understandable, then, why many men wish to refuse the office and must be pressed into service. To earn the epithet of "dog and an alcalde" (one of the milder terms applied by his co-villagers), to waste weeks of his time in performing the demeaning tasks associated with his office, to expend a large amount of wealth in necessary feasting—these features of the alcaldeship do not attract even those who enjoy wearing shoes, or bearing the vara. Yet the fiesta mayordomos must almost inevitably pass to the alcaldeship. There is no way of preventing this final reward for having held religious office.

It would appear that in order to avoid the alcaldeship when the office has fallen into disrepute men would also refuse to participate in the religious events. This is, however, rarely the case. The mayordomos win great prestige in the performance of their duties (cargos). Everyone esteems their sacrifices of wealth and property, for it is thought that the saints they serve will bring benefits to the community as a whole. In addition, the church exercises both subtle and overt pressure to keep the mayordomos in line. A mayordomo who decides to forego the recognition of the community in order to save himself from eventual bankruptcy will be discriminated against by the Governor, judged harshly by the priest, and cursed by the Indians themselves.

Where formal political organization has broken down or where the offices have become devoid of any real significance and have been shorn of their essential authority, as in Kauri, a sub-rosa political machine has

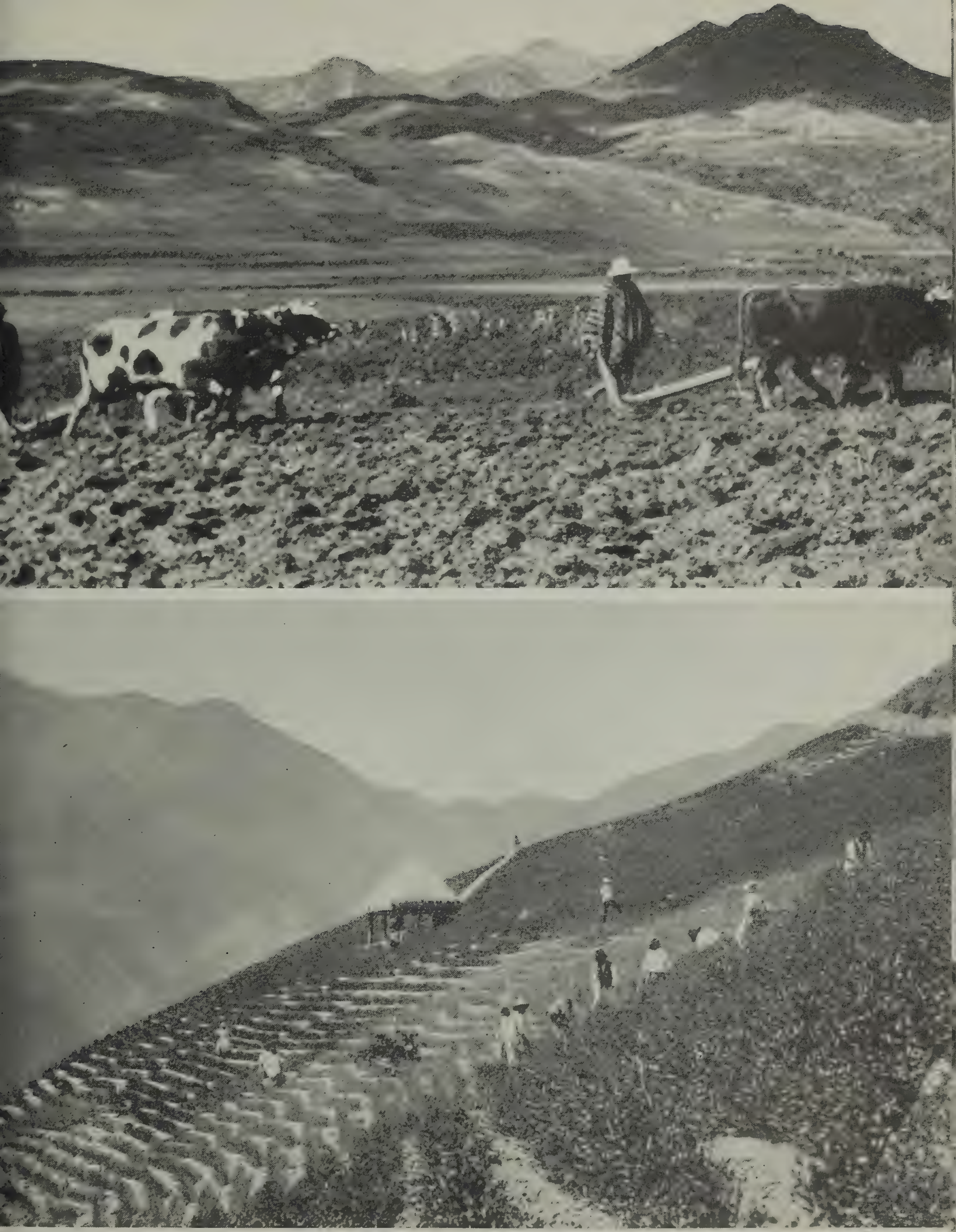

Plate 93.—**Modern Quechua agriculture.** *Top:* Plowing on valley farm near Cuzco. *Bottom:* Hillside terrace agriculture. (Courtesy Grace Line.)

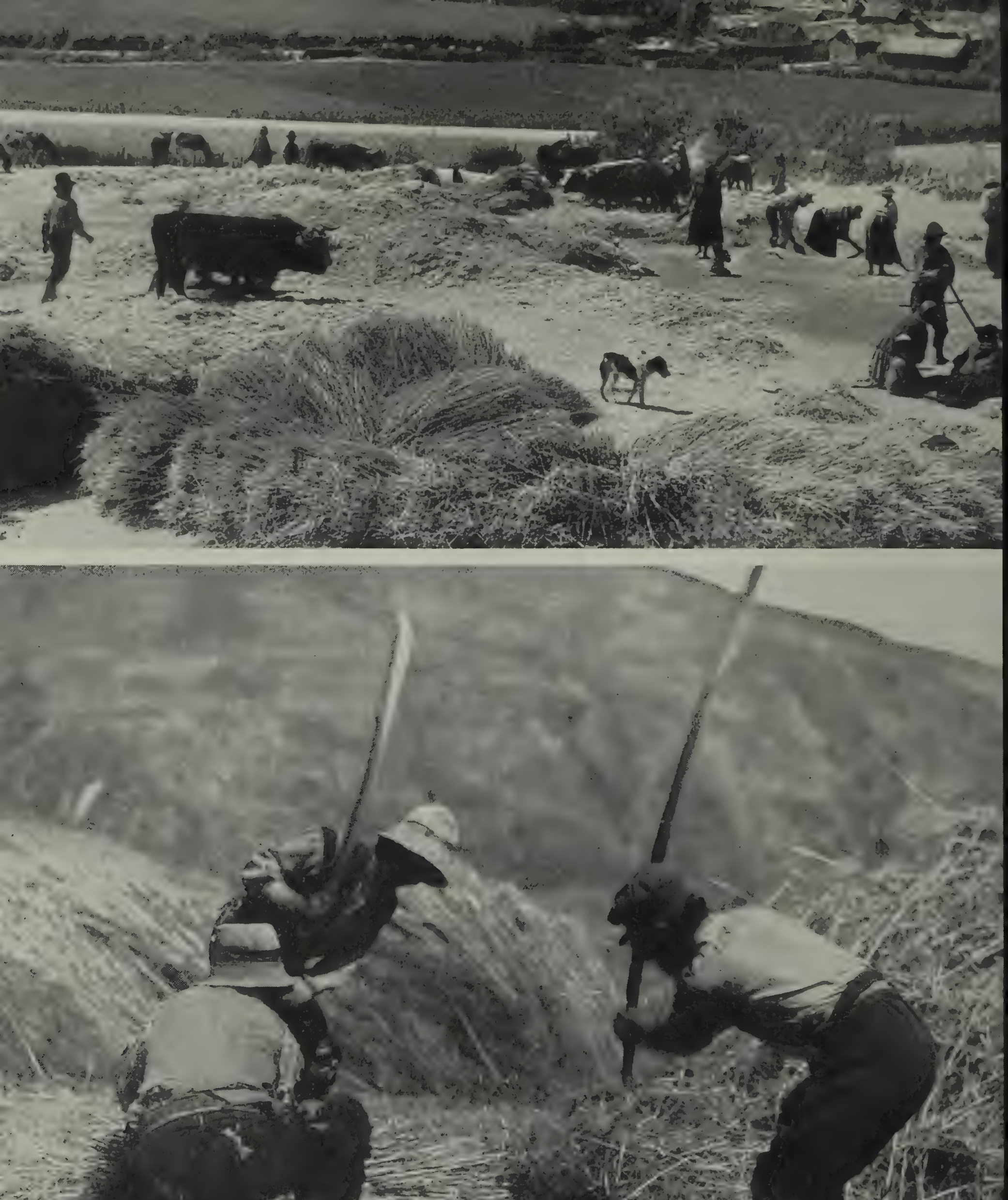

Plate 94.—**Indians of the Peruvian Highlands threshing wheat.** *Top:* The use of ox teams to tread the grain on threshing floor. *Bottom:* Threshing by flailing. (Courtesy James Sawders.)

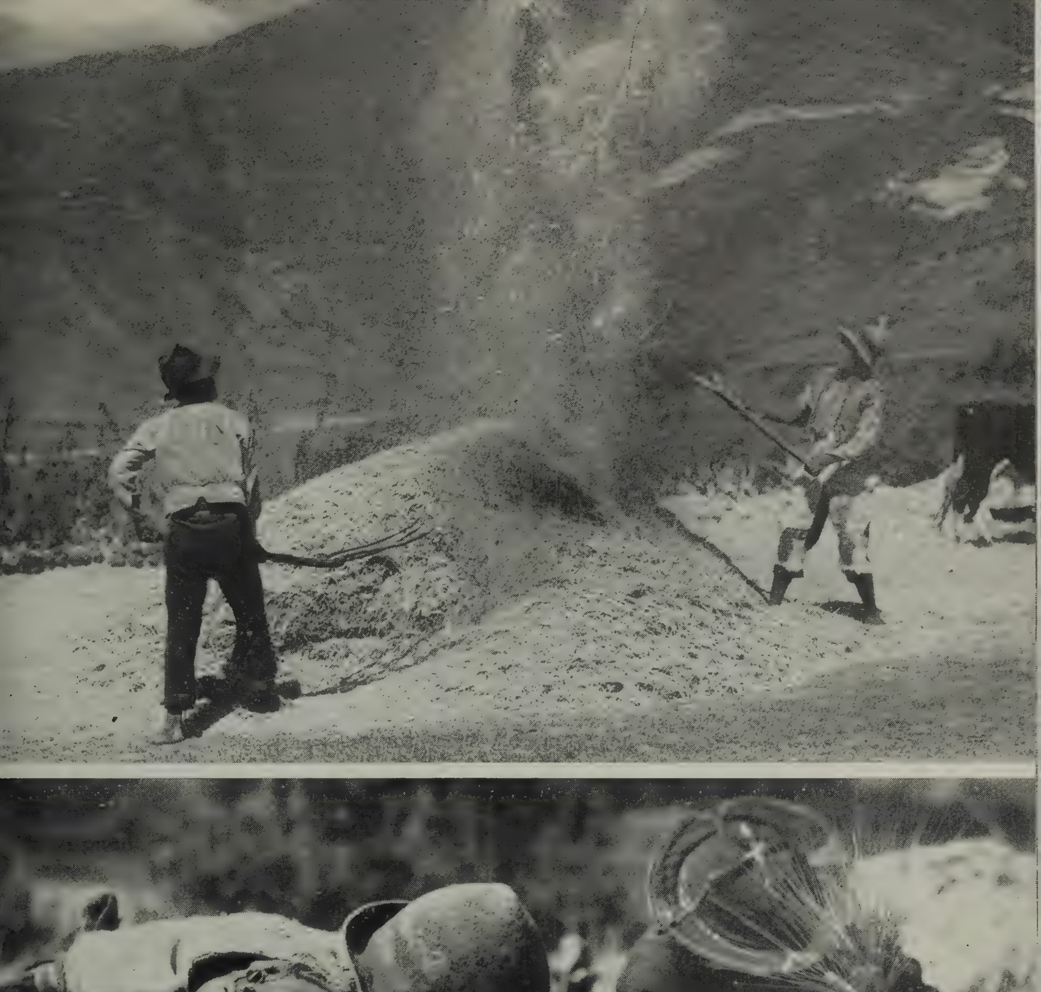

Plate 95.—**The wheat harvest in the Cuzco area.** *Top:* Winnowing. *Bottom:* Indians at Anta fashioning a cross of wheat as a thank offering for a good crop. (Courtesy James Sawders.)

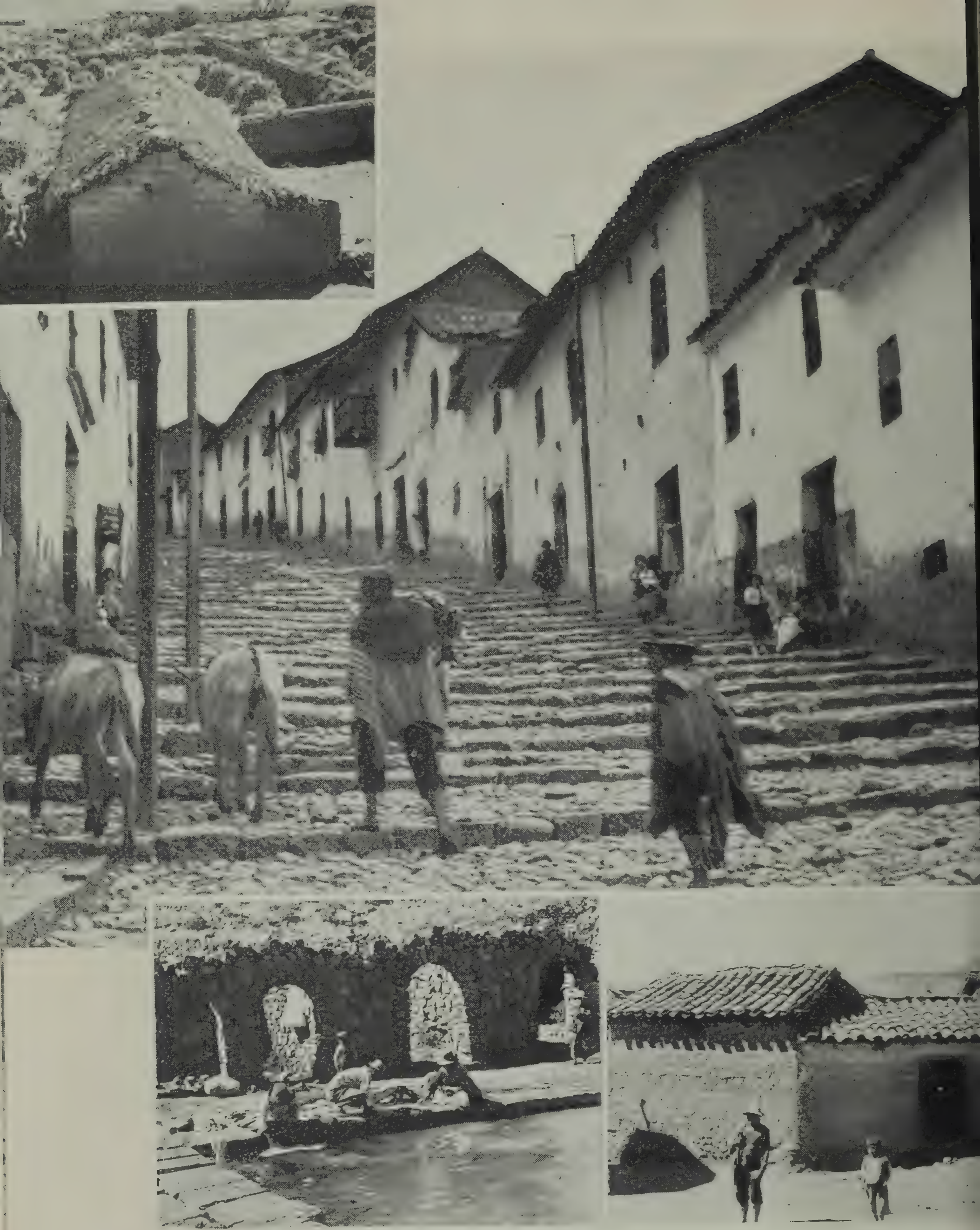

Plate 96.—**Quechua community life and houses.** *Top (left):* A thatch-covered hut of the Highlands. (Courtesy American Museum of Natural History.) *Center:* "The street that tired the fox," Cuzco. (Courtesy James Sawders.) *Bottom (left):* Washing clothes. (Courtesy Truman Bailey.) *Bottom (right):* An adobe house with roof of locally made tile. (Courtesy American Museum of Natural History.)

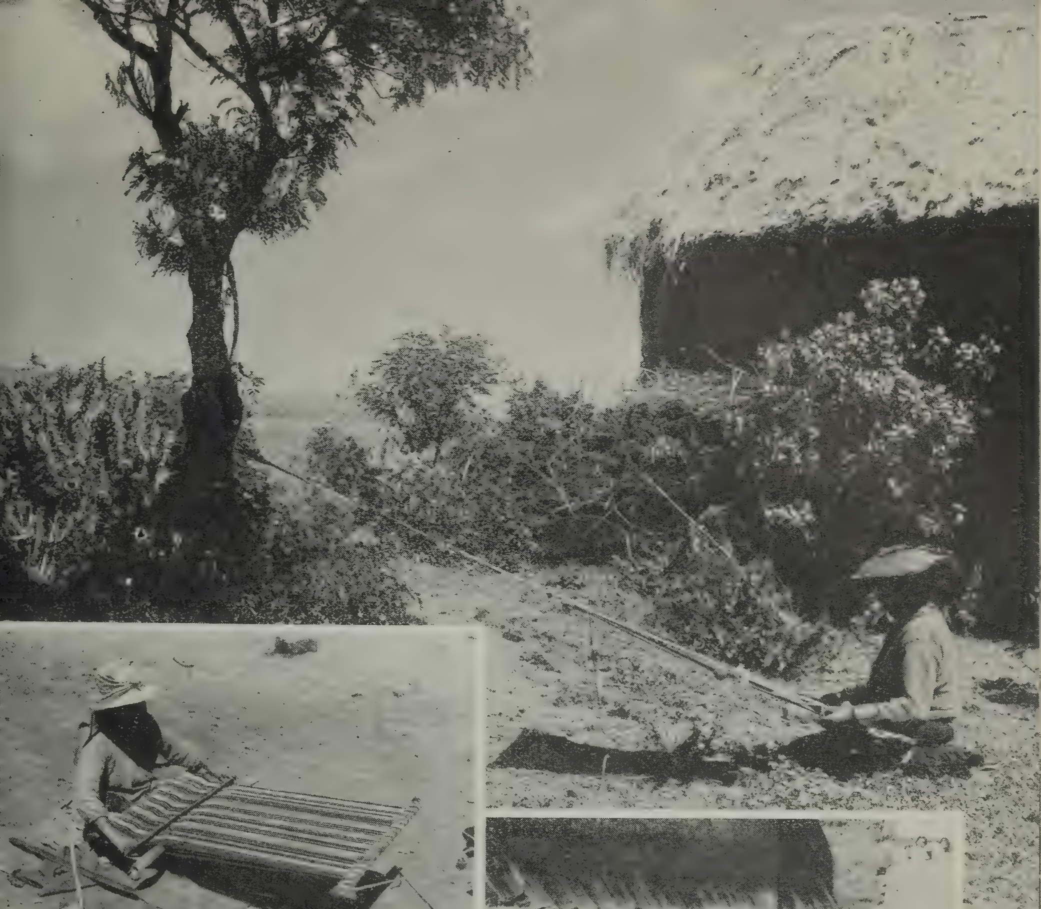

Plate 97.—**Quechua weaving.** *Top* and *center* (*left* and *right*): Native style looms of Peruvian Highlands. *Bottom* (*left*): European modifications to the loom. (*Top*, courtesy Grace Line; *center* (*left*) and *bottom* (*left*), courtesy Truman Bailey; *center* (*right*) courtesy American Museum of Natural History.)

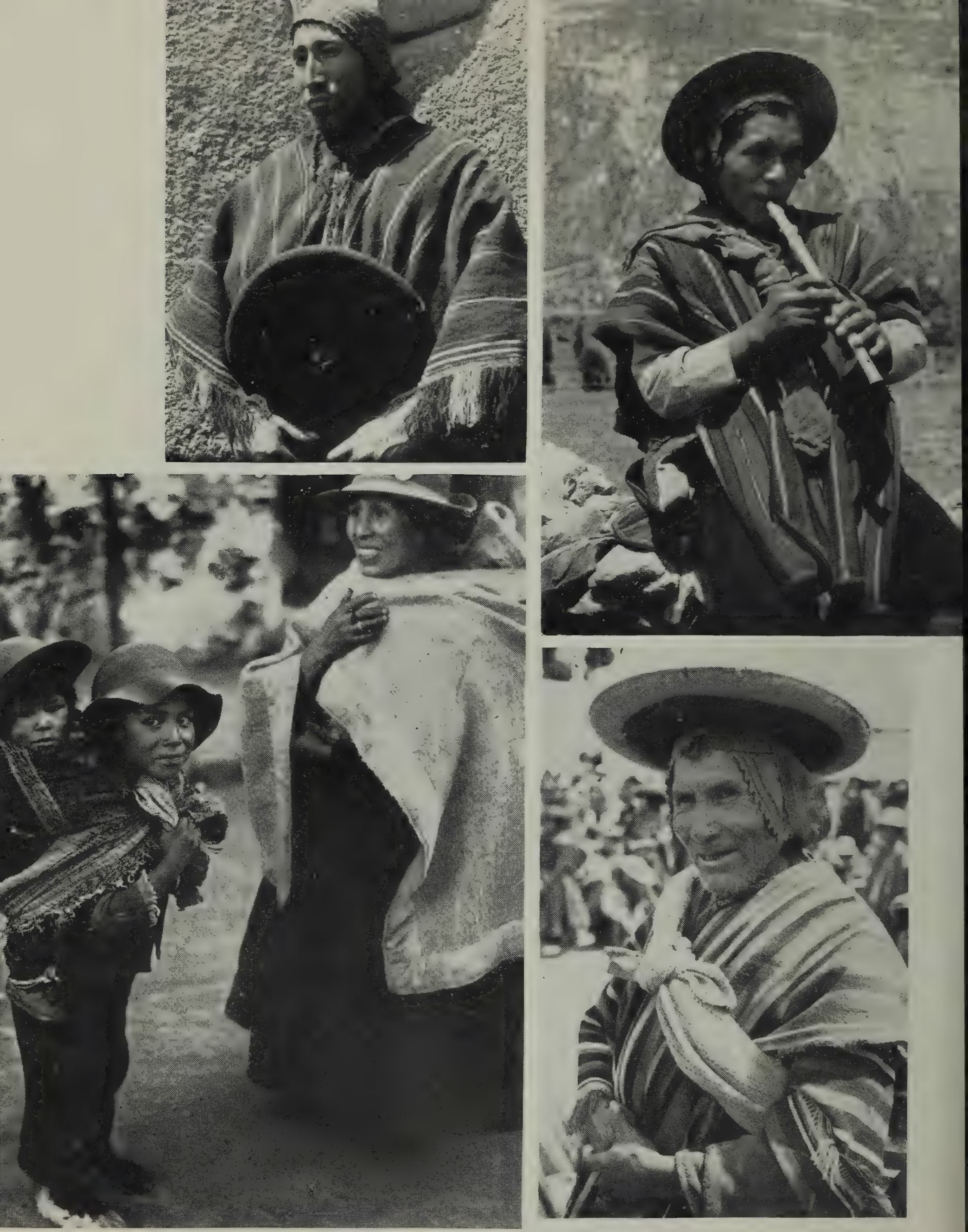

PLATE 98.—**Quechua types.** *Top (left):* A Highland *Quechua.* (Courtesy Bernard Mishkin.) *Top (right):* A flute player. (Courtesy Truman Bailey.) *Bottom (left):* Boy carrying an infant at Cerro de Pasco, Perú. (Courtesy American Museum of Natural History.) *Bottom (right):* A sorcerer of Kauri. (Courtesy Bernard Mishkin.)

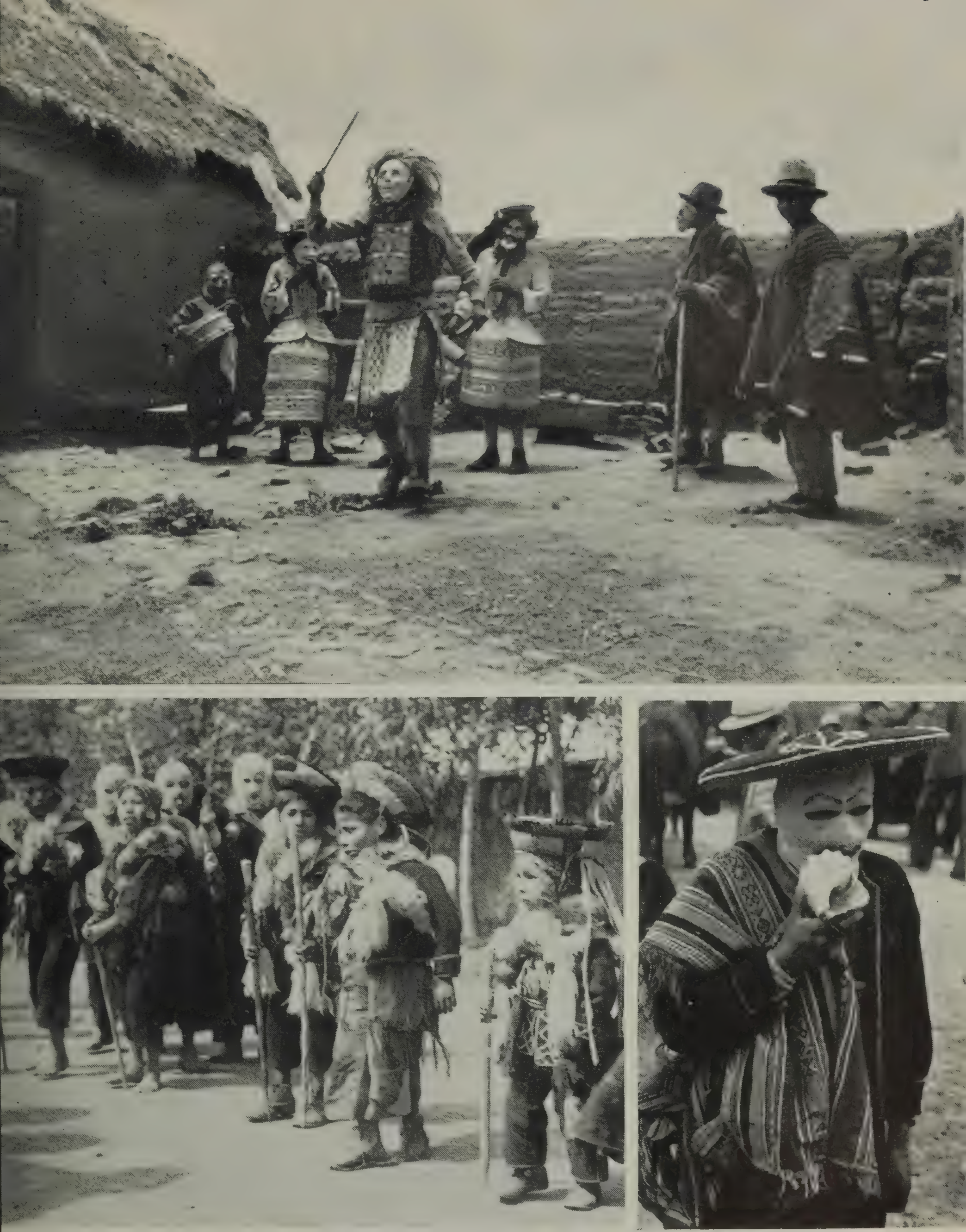

PLATE 99.—**Highland festivals.** *Top:* Masked dancers. (Courtesy Grace Line.) *Bottom (left):* Feast of San Isidro with children participating. *Bottom (right):* Feast of San Isidro with masked man playing a shell trumpet. (Courtesy Truman Bailey.)

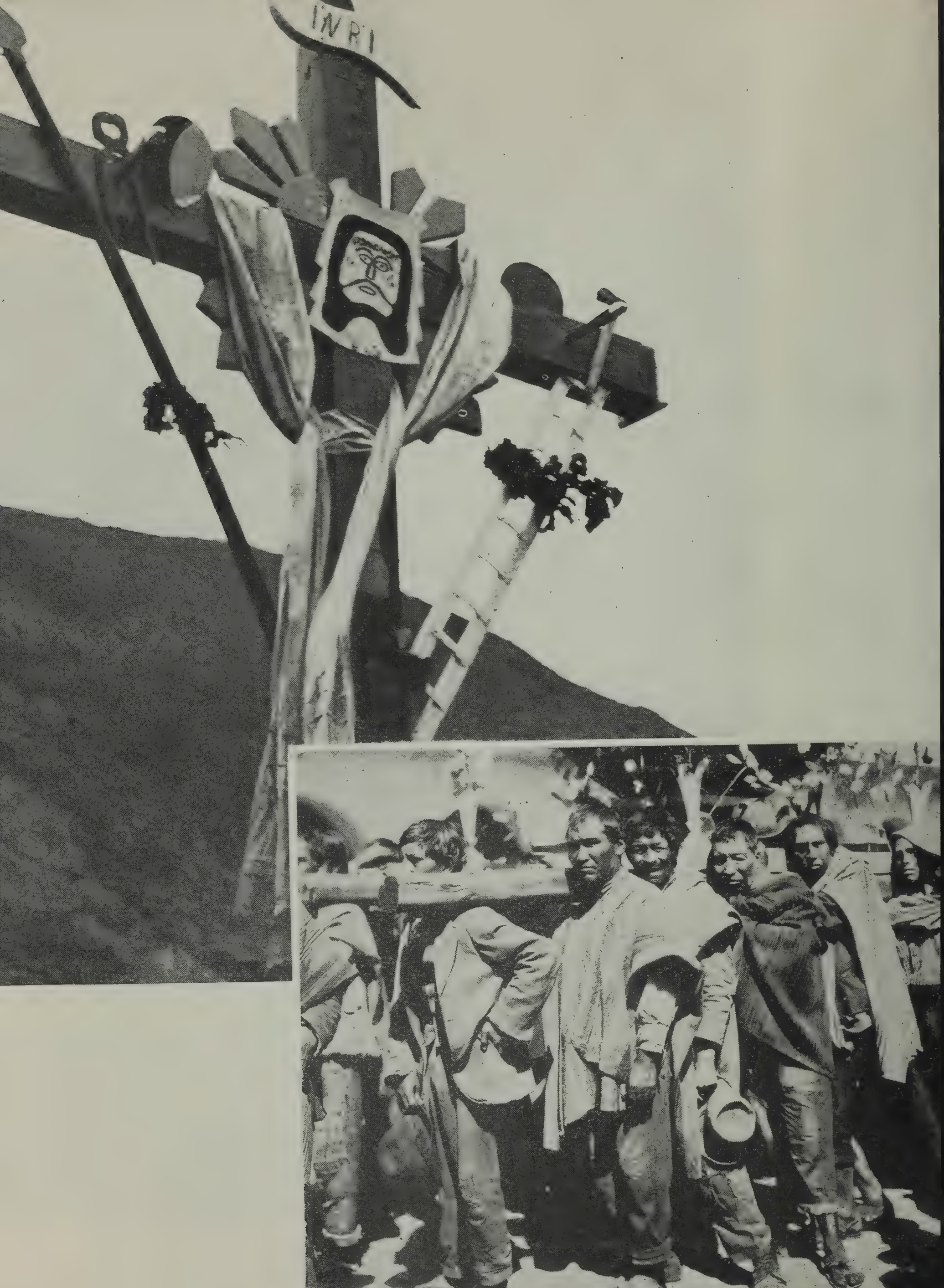

Plate 100.—**Modern Quechua religion.** *Top:* A wayside shrine. (Courtesy Grace Line.) *Bottom:* A Highland funeral. (Courtesy James Sawders.)

grown up. The older men, many of them "brujos," or curers, represent the genuine leadership of the community. They determine what group actions are in the best interests of the community. Quietly, they will settle quarrels among the inhabitants. Men who have lost their land or are in trouble with district authorities will turn to them for advice. Thieves and strangers are stringently dealt with by these capable and highly respected elders. Nor does the alcalde ever interfere with their functioning, but rather bows in deference to their wishes.

A variant of the political organization described above is to be found in the community of Qqueros, situated about 50 miles (80 km.) east of the village of Paucartambo, Department of Cuzco. Qqueros is completely isolated; a few llama trails lead to roads connecting it with the outside world. The altitude and distance from populated centers make it almost inaccessible. The community consists of some 40 families distributed among half a dozen haciendas. At the top of the camachicocc, which is the name used for the official hierarchy, is the mandón, also called here Inca Kképacc or Inca Segunda. He is appointed by the hacendado, and his main function is transmitting the orders of the landlord. He also supervises the other officers with regard to the execution of these orders. The alcalde, or Inca Justicia, is the real leader of the Indian community. He is elected to hold office for 1 year by the consejo de los yuyacc, the council of old men. The alcalde in Qqueros is in charge of maintaining law and order, heads the administration of justice, presides over the agricultural labors and the faenas, is responsible for combating plant diseases and for dealing with pumas that attack the herds. The alcalde also presides over the fiestas, sitting at the place of honor in the company of the mandón, the capillayocc, the kkollana, and the regidores. To qualify for office, the alcalde must have served previously as alguacil, regidor, and kkollana. He must be legitimately married.

The regidores, who number one to three, are named by the alcalde when he takes office. The council must approve these appointments. The alguaciles are here comparable to the regidores of other communities. They are young men who act as messengers, police, etc. They are also appointed by the alcalde.

The capillayocc, or fiscal, is one of the most important posts in the community. The occupant, usually the oldest man in Qqueros, is in charge of all religious matters. He must be an expert in Christian as well as pagan ritual. In practically all cases, the capillayocc is a well-known sorcerer and diviner.

Another religious dignitary who has status as an officer of the community is the kkollana, mayordomo of the fiesta of Kkorpay. He is considered the great benefactor of the people of his community. The outlay of money, food, and property in connection with the fiesta require that he be a man of some wealth.

Other officers whose functions are not clear are the Khorpos and the chak'oce, or hunters. These latter seem to be responsible for keeping the community from being harmed by pumas, condors, foxes, and the wild vicuña herds.

The council of old men has a great deal of power. The six members meet usually in the house of the alcalde to decide any of the matters brought to their attention. When the new alcalde is to be elected, the old alcalde, surrounded by the members of the council, suggests the name of his successor. Each member then speaks on the suggestion, emphasizing the good and bad points of the candidate. A divination ceremony follows in which the will of the Aukis (the mountain spirits) is consulted. If the sign is satisfactory, the old alcalde and the members of his council drink chicha to the continued well-being of the community and to the success of the new alcalde. Meanwhile, alguaciles and regidores blow the panpipes to announce that the new alcalde has been elected (Yabar Palacios, 1922, pp. 7–12).

This summary of Qqueros community organization reveals at once that much of an early structure has survived into the present. Some of the offices may be entirely free of post-Columbian influence. In any case, by reason of isolation and inaccessibility, Qqueros' political organization retains certain vitality and is allowed to function undisturbed by state or church.

There seems to be absent among the *Quechua* of today any strong intercommunity feeling. Certainly, no current of a national consciousness exists. Each community lives, primarily, in its own world with little concern for the other. Occasionally, the members of one community will visit another to help in plowing or harvesting. But this is a product of kinship obligations usually, and belongs to the category of mutual assistance given by relatives. At fiestas, intercommunity relations are cultivated with some care. On the other hand, the political uprisings that occur from time to time show relatively little sense of united action. Each social eruption is local and spontaneous and the majority are manifestations of specific, local issues. There is reason to believe that with the recent improvement of communication the Peruvian *Quechua* are experiencing wider social contact, and a conception of *Quechua* unity is growing.

The family.—The *Quechua* family has few primitive characteristics. Perhaps it might be termed bilateral, in the sense that the modern Western family is bilateral, with some patrilineal emphasis. The family functions, to some extent, as an economic and social unit. In matters of authority, it enjoys certain well-defined rights and prerogatives; it operates in the religious field as well.

The composition of the family group varies considerably. Within a family compound there are usually found one set of grandparents, the parents—in some cases the father's brother and his immediate family—and the children. Where the household plot is small, the family compound is necessarily incapable of unlimited expansion. Hence, the number of residents in the compound is accordingly limited to the number of house units that can be built on the household ground. As younger members of the family marry they are compelled to build houses in other sections of the village. If the distance between the houses is at all sizable, as it often is, the younger offshoots of the family tend to establish independent identity and function as separate family units.

Residence is thus an important factor in determining the composition of the functional family group and, since living space is restricted, this group is likely to include few adult members. In many communities, the majority of family units are conjugal families. Even in the open or dispersed villages, where each family resides in the midst of its own arable land and considerable space for expansion is available, the number of residents in a common compound is definitely limited. Parts of the family group are constantly breaking off either to build houses on the fringe of the same tract of land or to seek house plots in another tract. The new household forms associations with others nearest it. In due course, close economic and social ties with the different family groups in its vicinity become as important as relations within the extended family. Family obligations and ties, however, are by no means annihilated.

The primary land divisions are the family holdings. Each family possesses its tract within the various sections of community land (see agriculture), and apportions plots for working by the individual members of the family. The head of the family may divide the family land as he sees fit, either on a temporary or permanent basis. Normally, if the size of the plots is sufficient to satisfy the family needs, all the members of the family are united around that central core of community life—the possession of land. The defense of the land and its working is first and foremost a family matter, and each individual is obliged to cooperate with the others. These reciprocal obligations cannot be ignored, especially as they concern labor exchange. Work in aine is founded on the principle of family cohesion.

The family head, in whom the ownership of the land is vested, stands in a special relationship toward the adult members of his family. For since the family acts as a unit with respect to landholding, it similarly must unite around the head of the family. This favored position in the family is expressed both in the nature of his authority and in the obligations for providing labor to work his fields. Each member of the family who has received a strip of land in the family plot must give several days of free labor to the head of the family. There is, however, a limitation put on the number of "free" days the junior members of the family contribute. Usually after 2 or 3 days, the family workers go on aine, and from then on their workdays must be returned in kind by the head of the family. Or, as happens not infrequently in recent years, a daily wage in coin may be paid.

The authority exercised by the head of the family extends beyond the economic sphere into the political and religious life of the *Quechua*. Behind any community action is to be found a series of individual family decisions. If unanimity or near unanimity among the family heads is not reached, each family will act independently. The higher political officers of the community or the sub-rosa political leaders are always family heads, and in the formal or informal councils all the family heads are represented. Family interests play a part in the deliberations of the councils. This is not only an observer's conclusion. According to native theory, family interests determine the community interests. There should be no contradiction between the two. A loss of land suffered by a few families evokes community defense since each and every family feels thereby threatened. In practice, modern conditions have introduced diverging family interests and, as a result, the interests of the community appear contradictory and confused. The poorer families have too little to defend; the richer families defend their own. Unified community action consequently becomes relatively rare.

But as the community loses its force and significance, the institution of the family gains in stature. Thus, in many *Quechua* villages family loyalty and tradition are highly developed. The family group acts in an organized fashion, each member coming to the assistance of the others in economic, political, and religious matters. Family unity is best seen in the land disputes that arise between families. Here one notes the frequency with which cases are reported of family pitted against family. One group is accused of having taken a piece of land belonging to another family group. The two families will quarrel, resort to legal action, carry on a perpetual feud, and practice sorcery against each other. In the end, the community is torn with internal strife while the family is all the more strengthened. Usually, in these instances, the authority of the head of the family is well maintained.

Certain rites and ceremonies such as the ccoime (offerings to the earth) and the Christian fiestas are essentially family affairs, although they are conceived as benefiting the whole community. All the members of the extended family group are expected to give their assistance and to contribute foodstuffs, coca, and aguardiente. In the simpler agricultural rites, the head of the family with the members of his immediate household can perform the necessary acts. The fiestas, however, are elaborately organized and require the cooperation of a large number of people. Members of the family are seldom loath to lend support. They are motivated not only by fulfilling the family obligation but because they reap some reward as well—in the form of social recognition and supernatural protection.

Despite the tendency for the family structure to remain intact, the *Quechua* family has not escaped the effects of the disintegrating process that has crushed the community. The cases in which family unity has grown are in the minority. More commonly, the extended family has not withstood the attack of modern economic conditions. As land shortage and poverty increase, the number of disunited families increase. In the absence of any strong cohesive force, family ties are easily broken and kinship obligations go by the board. The authority of the head of the family is so weakened that common action is nearly impossible to achieve. (See Castro Pozo, 1924, pp. 70–71.)

In addition, the family has fewer economic and political functions to perform in recent years. The usurpation of the community's power (see section on the community, p. 441) by the district organization of the prefecture leaves little authority in the hands of the community or family. The family as a self-contained unit based upon an all-embracing sexual division of labor does not give a true picture of the modern *Quechua* family. The Indian has become dependent on the money economy, and a large part of his production is sent to the market. Specialization of production, always present to a certain degree, is now one of the dominant factors in *Quechua* economics. The family, therefore, supplies fewer of the basic necessities of life than it has in the past.

What is true of the agrarian *Quechua* family is even truer of those families that migrate to the cities. Under urban conditions, the family undergoes even greater atomization. Family life of the town *Quechua* is comparable in all respects to family life in modern industrialized society. The Indian participates in the new associations that are usually a part of civic life. The family is subordinated to the other institutions that have, in a large measure, replaced it economically and politically.

Kinship.—*Quechua* kinship terms have been markedly influenced by Spanish. However, the rise of Spanish relationship terms does not always mean that the *Quechua* equivalents have been forgotten. Rather, many families will know both the Spanish and *Quechua* term of address expressing a particular relationship but will prefer the Spanish term. So, for example, in Kauri the Spanish term, "yerna," for daughter-in-law is widely used, but the *Quechua* qachoni is known and is sometimes substituted for yerna. There are some families conservative and traditionalist, that take pride in retaining the pure *Quechua* terms.

In the grandparent generation, only one set of terms is used; the paternal and maternal lines are not differentiated. Great grandparents are designated as "fathers" or "mothers" of grandparents and remote ancestors are called "grandparents of grandparents." Fathers' brothers are called "fathers" and mothers' sisters "mothers" or often "aunts." The mother's brother and father's sister have special terms. The kinship schedule obtained in Kauri denoted a cross-cousin marriage which is further borne out by the fact that a man calls his wife's brother "tio" (uncle). Practically no cross-cousin marriage (unacceptable as it would be to the church) occurs today. *Inca* kinship terms likewise suggest cross-cousin marriage, but there is no direct evidence of this as a practice.

Tio's children, and the children of the father's brothers are called "sons" and "daughters." The children of the mother's brothers and father's sisters are, as would be expected, "nieces" and "nephews." In Kauri, affinal relatives are subsume under three basic terms: "Father-in-law" and "mother-in-law," "daughter-in-law" and "son-in-law," and "uncle" for the wife's brother (who in turn calls his brother-in-law "qacay"). Most other affinals are blanketed under the term "cuñado," brother-in-law.

Siblings and parents' siblings are differentiated as to age by prefixing "older" or "younger" to the root terms. The terms vary with the sex of the speaker. A generation principle is clearly present.

There are few formal rules of behavior associated with the kinship terms. In general, one shows the highest respect toward the members of the parents' generation. This respect relationship is even further intensified in dealing with affinal relatives. On the other hand, the generation respect barrier is lowered between grandparents and grandchildren. Good-humored bantering is permitted and certain liberties may be taken with one's grandparents. The *Quechua* hold the almost universal notion that grandparents spoil their grandchildren with constant attention and coddling.

The institution of godfather, "padrino," is well established among all *Quechua* groups. In some ways, the padrino-ahijado connection is the most important relationship the individual possesses. The padrino sponsors his ahijado, advises him, gives him assistance on special occasions, and stands by him through any crisis that may arise from his early years to his maturity. In return, the ahijado is at the call of his padrino for work in the fields or for any other service required of him. The ahijado is expected to show the utmost respect in his dealings with his padrino, while the latter tempers the formality of his behavior with sympathy and affection. Similarly, compadres take a respectful and rather solemn tone toward each other. The father receives favors from the godfather and allows him to intervene in many family matters. Many cases occur in which the padrino compels the father to alter his treatment of his son.

Generally, there are three varieties of padrinoship. The padrino at the birth of the child, which is the most important of the three, may be a Mestizo from a neighboring place or a man of wealth and influence in the community. Poor men who would be capable of giving little help to their godchildren are not sought as padrinos. The second padrino at the haircutting ceremony of the son is not especially important in the life of the godchild. Often he is an itinerant peddler or a trader from a distant town who visits the village once a year. The padrino at marriage is usually a relative, one of the wealthier members of the family. All three padrinos must make the necessary expenditures in connection with the ceremonies at which they officiate.

Marriage.—The *Quechua* community is endogamous by preference; relatively few marriages are contracted outside the community. Where cases of exogamy occur the great majority of the couples go to live with the husbands' families; residence in the wives' communities is rare. Strangers are always undesirable and greatly feared. This feeling is intensified to the highest point by the Indian's struggle to maintain his landholding. Endogamy, in his own mind, gives him some security.

The age at which couples marry is relatively late in some regions. In and about Kauri men and women marry at the age of 20 to 22, although marriages of boys of 17 or 18 to girls of 16 are recorded. The age at which men marry is correlated with the conscription age. Church practice defines the proximity of blood relationship permitted between man and wife. Generally, second cousins or those more closely related are not allowed to marry. Such cases seldom, if ever, occur.

A high degree of freedom in selection of mates is found in most *Quechua* communities. The prospective bride should be proficient in her housework, should know how to spin and weave with passable skill, be capable of helping her husband in the fields, should be diligent, and be of good moral character. The husband, in addition to the qualities of steadiness and diligence admired by the *Quechua* peasant, should either own a piece of land in his own right or belong to a landowning family. These are the minimum qualifications expected of marriage partners. When they are fulfilled, the respective families are likely to accept their sons- or daughters-in-law without objection even though they may have had no voice in their selection. There are, of course, families possessing wealth and social status who seek mates for their offspring from among families with similar attributes.

Such families establish their connections and betroth their marriageable members at an early age. No individual choice comes into play (Castro Pozo, 1924, pp. 128–129).

The period of courtship may last from a few days, or perhaps a few hours, to months and years. Frequently, young people are thrown together in the pasture grounds while they are herding sheep and llamas. This pastoral setting provides opportunities for chatting, wooing, drinking, and sex. Couples may meet daily for years without being discovered. Often when they have come to a decision, they will surprise their families by announcing that they are ready to marry. In the district capitals, the Sunday market and Mass are favorite trysting grounds for young couples of the surrounding communities. Following a few casual encounters, planned meetings may be arranged at which promises and little personal mementos are exchanged.

In the Ccatcca district, courtship and marriage commonly take place at the fiesta of Santiago (last week in July). Hundreds of couples appear in the plaza arrayed in their Sunday best to dance around the community altars. During the days of festivity, a majority of the young men and girls pledge themselves and return to their villages ready to initiate negotiations for marriage. The plaza scene during the fiesta is colorful. Endless rows of young men and girls facing each other line up at the four sides of the plaza, dance for hours at a time, and sing the teasing songs of courtship associated with the fiesta. The whole scene is reminiscent of Garcilaso's description of the mass marriages that occurred in *Inca* Perú. In some cases, the couples are meeting for the first time, but apparently most of the couples have already pledged themselves and are merely confirming their betrothal publicly. It sometimes happens that couples separate at the fiesta and one or the other party chooses a new mate. "Love at first sight" is recognized as a proper motive for forming new liaisons. Throughout the festivities, couples will disappear for a time to wander off to the unfrequented places on the edge of the town to indulge in sexual relations.

Premarital sexual freedom is customary in most *Quechua* communities, though in northern Perú and in some parts of Central Perú, where Protestant missionaries have been at work, virginity is a formal prerequisite for marriage. Castro Pozo (1924, pp. 134–135) states that here proof of the virginal state of the newly married girl must be borne on a fine white bayeta and be exhibited. Elsewhere, for example in Kauri, even girls who are considered loose are merely warned that they must select one of their four or five lovers and settle down. But the matter is not taken too seriously. Informants agree that such girls, called cuchipuric, eventually find husbands and become model wives.

Once the period of courtship is terminated and the couple has decided to marry, the young man may go himself, send his parents, or his padrino, or some other relative to obtain the consent of the parents of the girl. In Kauri, the parents of the suitor will always go to interview the parents of the girl on a Thursday, for that is the favored day for such missions. The suitor or his intermediaries may bring a few gifts and usually coca and aguardiente, which they pass around after the marriage has been agreed upon. Sirvinacuy, or trial marriage, begins immediately after the suitor has been accepted.

The period of sirvinacuy lasts for 1 to 6 months and sometimes to 2 or 3 years while the couple lives with the husband's family. Trial marriage is everywhere practiced among the *Quechua* with the exception of a few restricted areas where the influence of the Protestant missionaries has been felt. (See Castro Pozo, 1924, p. 134.) Some communities seem to favor a longer period of sirvinacuy. The reason given is that enough time should elapse for one or two children to be borne before the relationship is made permanent. It would seem, also, that one of the objects of a prolonged sirvinacuy is to postpone establishing the couple in a separate household and on its own plot of land. An additional delaying factor for those families desiring a church wedding at the close of the trial marriage is the accumulation of sufficient money to pay for the expenses of the ceremony.

The church wedding to mark the end of sirvinacuy and the beginning of permanent married state is, as one would expect, common in those regions where the church has a firm hold. It is almost nonexistent in the more isolated regions. However, a type of forced marriage is known. Once a year, or less frequently, a priest may visit one of the recalcitrant communities in the middle of the night. He sends his sexton and local appointee to waken the unmarried couples, lines them up in the open or in a vacant hut, and marries off the assembled pairs, exacting 2 or 3 soles from each couple. This is done regularly in Kauri and is reported from central Perú. (See Castro Pozo, 1924, pp. 143–144.)

Fewer than 5 percent of the trial marriages do not end in permanent contracts. Divorce is, of course, much less common. The main grounds for separation are, from the husband's side, inability to conceive, laziness, incompetence, and adultery; from the woman's side, cruelty.

Property and inheritance.—Land, houses, house plots, and livestock constitute the primary possessions of the *Quechua.* Productive property in the form of land and livestock is unevenly distributed among the population. A large percentage own no land at all, rent from the haciendas, or are entirely dispossessed. (See section on agriculture, p. 420.) On the other side, in a few places in southern Perú and elsewhere, some Indians and Mestizos are to be found who own sizable farms. Even within the community there is present marked differences in the size of landholdings, which is the basis for social and economic stratification. No conflict has as yet developed between the small and more prosperous landowners of the community.

These differences in landholdings have been caused by (1) the increase in population (see section on economics, p. 426), and (2) the accidents of inheritance, which have amassed considerable landholdings in the hands of one or another family.

Theoretically, the rules of inheritance followed by the *Quechua* are defined by Peruvian law based on modern Western codes. The offspring can inherit from their parents in accordance with the will and decision of the latter. Women have equal rights to inherit with men. In practice, the rules are not so simple. The *Quechua* principle that each offspring should inherit equally is first modified by the prerogatives of the chanaco. The chanaco is the youngest son, who has absolute rights to the house and house plot. The pive, or oldest son, is usually the executor of the family estate. His decisions in the absence of witnessed instructions from the deceased are usually accepted by the other heirs, although cases do occur in which some of the heirs will challenge the executor and prosecute the matter in the courts.

The modern principle of legal equality for women has not been accepted wholeheartedly. Numerous disputes occur within the community with regard to the inheritance of land by women. One factor to be considered is the fear that strangers might marry women of the community and come to work their land. One hears from certain informants that women should not be permitted to inherit land since they do not work in the faenas, the compulsory public works. Dispite all objections and prejudices to the contrary, the laws do protect female inheritance and the Indian begins to accept the inevitable.

In Kauri, one curious form of inheritance relates to the chanaco inheritance of the house. Apparently, the youngest son is entitled to the adobe part of the house but must divide the materials of the thatched roof and, mainly, the beams with the other heirs. Wood is an article of great value in the higher altitudes. Property of sentimental and religious value is highly regarded by the *Quechua*. Many a destitute Indian will suffer painful poverty before he is willing to sell a queros that has passed down in the family, or a copper pendant which he had as a child.

It should be pointed out that conflicts frequently arise between the principle of absolute ownership and usufruct. Heirs who have attempted to regain a piece of land formerly given in usufruct by their fathers to a friend or distant relative have difficulty in winning their point. The community is bound to be against them, though the law may be on their side. Sorcery and magic are usually invoked to settle such disputes.

LIFE CYCLE

Infancy and childhood.—Children have a clearly defined role in the *Quechua* community. Certain types of work are systematically assigned to them; from the earliest age, children are productive members of the community. This fact has given rise to the notion that children are unwanted by the *Quechua* unless the household requires additional labor, that parents value their livestock more highly and ignore their children completely. The truth is that parents display what may be called a normal amount of affection toward their offspring, though they do not expose them to coddling and overprotection or drench them with excessive sentimentality. The events surrounding childbirth and the period of infancy and childhood are accepted with matter-of-fact realism.

Pregnant women engage in their customary activities until about 2 weeks before delivery, when they remain at home attending only to the duties of the immediate household. A midwife may be called in for the birth of the child (at the rate of 20 centavos per day), or one of the relatives who has had several children will lend her assistance both at the delivery and in the running of the household. The expectant mother is massaged with coca and aguardiente. She is given steam baths in which aji (pepper), tomato, and incense are used. As soon as she begins to feel the birth pains, the midwife presses her abdomen and pulls at the neck and feet to hasten the delivery. Immediately after birth, the umbilical cord is cut with a knife or potsherd and tied with a woolen thread wound to the left, and the infant is bathed. An informal celebration occurs in some communities at the birth of a child, but no fiesta in honor of the occasion is held in Kauri. Here the child is inscribed in the municipal register at the capital of the district. After 4 or 5 days, or sometimes not until 15 or 20 days after birth, the child is baptized. Baptism is an event of first importance. The padrino, called "marccac" in Kauri, must be sought from among the influential Indians or Mestizos in the neighborhood and the appropriate gifts must be presented to him. If the newly born infant becomes seriously ill or is in danger of dying, a neighbor is usually asked to perform the baptismal ceremony. For unless the child is baptized before it dies, its spirit will bring harm to the community and stop the rains. Even children who are meant to be abandoned or destroyed (infanticide is not uncommon among the *Quechua*) have to be baptized. Those who die unbaptized are cremated and their remains buried in a distant, deserted place. Even the skeptical who have no fear of the malevolent spirits believe that baptism must be performed in order to give the child a name.

The mother bathes the child every day for the first 6 months in warm water and then douses it with cold for protection against the rigors of

Andean temperatures. If the child is feverish, herb lotions made of chinchi-chinchi, mollaka, altea, etc., are applied. Or if it takes cold, the mother chews yerba buena, peperme, and feeds it the masticated pulp. The child is given the breast some five times a day; in Kauri, whenever it clamors for it. No regular nursing times are observed. Throughout the period of infancy, the child is carried in a large diaper-like shawl called the quipe in Central Perú (known as hualtja in Kauri). The quipe measures some 8 to 10 feet (2½ to 3 m.) long by 6 inches (15 cm.) in width (Castro Pozo, 1924, p. 82), giving the infant coverage from neck to feet and permitting only movement of the head.

Weaning takes place between the ages of 18 months and 2 years. The mother at this time eats a great deal of aji and drinks aguardiente and chicha so as to spoil her milk. In addition, she puts salt on her breasts and coats them with a mixture of yerba buena and milk.

The hair-cutting ceremony, chuccha rutuy, of pre-Columbian origin, is the occasion for much festivity. Practically all boys between 1 and 3 years of age undergo this ceremony. The parents must find a padrino who is willing to contribute a sheep or money to his god-son. In southern Perú, padrinos for the hair-cutting ceremony are commonly *Aymara* traders (*Colla*), who by serving in this capacity form a useful commercial connection. If it is a *Colla* acting as padrino, he gives a llama and receives chuñu in return. On the appointed day, the padrino, in the presence of all the boy's relatives, cuts the lock of hair which has been prominently arranged by the mother. After the official lock has been cut, the parents followed by the grandparents and other relatives may come up and cut a lock for themselves. The ceremony can be held at any time of the year, on any day with the exception of Tuesday and Friday. A comparable celebration for girls is held at the piercing of the ears.

After the hair cutting, the child is allowed to go off alone and to participate in the games that children play. There are few group games. Houses in miniature are constructed, little corrals for sheep, bridges, roads, and cultivated fields are made by children. Or they enact religious fiestas, play at being regidores, and operate complicated aine accounts. All play seems to hinge on the imitation of and preparation for adult life. The father plays with his children but he does not admire them too much in public or single them out for attention. When he finds them disobedient, he punishes them with the proverbial whip—each whipping consisting of three lashes, in the name of the Father, the Son, and the Holy Ghost.

At the age of 3 or 4, children are given little tasks to do around the house; they take care of the chickens and learn to pasture sheep. At the age of 5, they are put in charge of a few lambs, which are pastured in the vicinity of the house. By this time boys are carrying wood and water, looking after the fire, and beginning to spin. Girls of 5 or

6 can cook and carry on most of the work around the house without assistance, which they are called upon to do during harvest time. All girls of 6 can spin; at 8 they begin to do a little weaving; at 12 are making bags, lliclias, and ponchos. Meanwhile, boys of 10 learn to work in the fields, help their parents in the plowing, sowing, and harvesting, accompany their fathers on trading expeditions, crochet chullos (a native cap) which they have sold for them on the plaza, and can hire themselves out for field work at the rate of 10 centavos per day (one half the adult rate). Young men and women between the ages of 15 and 17 are considered already fully mature.

Adulthood.—Men and women do not take their place as full citizens of the community until they have married, although they perform adult work long before the time of marriage. As indicated before (see section on Social Organization, p. 453), men marry between the ages of 20 and 25, women at 20. Soon after marriage, the content of life for the *Quechua* adult loses whatever little color and excitement it possessed previously. The period of courtship just completed had provided the only source of solid ego satisfaction that is to be found in the whole cycle of life from birth to death. Thereafter he must return to the realities of extracting a meager living from his sterile plot, of struggling to prevent the expropriation of the little land he owns, of performing his share of the public works projects (faenas) imposed on him by the Governor, and of fulfilling his religious obligations, which take up a great deal of his time and consume considerable of his cash assets.

Those who have done their military service before or after marriage are in a somewhat better position to face the battles of later life. They learn a little Spanish and, having seen a little of the world outside their village, are better able to place their own problems within the larger order of things.

Apart from labor in the fields and the momentary relaxation afforded by coca and aguardiente, the normal *Quechua* male operates in two spheres of action: politics and religion. Practically every young married *Quechua* will sooner or later be called upon to serve as regidor for a period of time. Usually the office is considered a nuisance, putting the holder of the office to some expense and consuming energy and precious time. But occasionally a regidor is intrigued by the sound of his title or, as happens in a few places, the holder of one of these offices exercises real authority and develops an ambition for leadership. Year by year, he devotes a large part of his time to a political career. In the end, he wins the highest political office the Indian can aspire to, having achieved a sort of status which may have positive or negative value in the eyes of his fellow villagers. Leadership is also won by the brujos—sorcerers, diviners, and curers. These are the old men who truly dominate the political and spiritual life of the community.

The religious fiestas constitute the high points of the annual calendar. Those who hold the major offices in the fiestas achieve genuine prestige. Men are willing to lose the accumulated savings of a life time in a display of generosity and a disregard of the expense entailed by offices in the important fiestas. Not only do the fiestas offer an outlet for ambitious men who seek approval in public life; above all, they provide the ordinary Indians with a periodic respite from a monotonous and painful existence.

The periods of life as conceived by the people of Kauri are as follows:

Huahua (infant): Birth to 2 yrs. of age, male and female.
Erque (very little one): 2 to 8 yrs.; fem., **pashña erque.**
Mactta (little one): 8 to 18 yrs.; fem., **pashña.**
Wayna (young one): 18 to 22 yrs.; fem., **sipas.**
Runa (man): 22 to 30 yrs.; fem., **sipas huarmi.**
Chaupi tiempo runa (man, one-half life): 35 to 45 yrs.; fem., **tiempo huarmi.**
Machu runa (old man): 45 to 70 yrs.; fem., **paya huarmi.**
Yuyac (he who remenbers): 70 yrs. up; fem., **yuyac huarmi.**

EDUCATION

The *Quechua* child is taught to be submissive and to bow before authority, to distrust the outsider, to fear the Christian-pagan hierarchy of spirits and deities, and to struggle as best he can to gain a livelihood. Throughout his life, he remains hemmed in from all sides. His daily experiences together with subtle family indoctrination teach him that he has no weapon with which to defend himself and tend to produce the familiar *Quechua* personality—the sullen and resigned Indian who breaks through his protective shell on some fiesta days with the help of aguardiente or, from time to time, in avoidance of a paralysis born of desperation (it would seem to the onlooker), is thrown into spasms of violence.

But the *Quechua* also learns to be a good farmer, to carry on animal husbandry, and to work at the arts and crafts connected with his village and family. It is with these economic activities that the overt educative process is concerned. As we have described (see Agriculture, p. 415), the *Quechua* people show a certain competence and resourcefulness in getting a living from their farming. Despite ignorance of modern agricultural practice and lack of facilities, they have accumulated an extensive body of lore, much of it truly applicable to Andean conditions. This mixture of proved knowledge and superstition is passed on from generation to generation. The father sets himself the task of teaching his son all that he himself knows of his work with unsurpassed seriousness, and he does so patiently and deliberately. Boys of preschool age accompany their fathers to the fields, are taught the use of the various instruments, are encouraged to try their hand at the work, are given light duties to perform in a regular aine, and are paid the half wage due women and working children. Girls, likewise, are taught the household arts by their mothers with considerable care. Parents and grandparents both give daily instruction in spinning, in weaving, and in whatever other local arts are practiced. The common phenomenon of older siblings teaching the younger is to be seen everywhere among the *Quechua*, although parents and grandparents take the major responsibility for instructing the young.

Knowledge and instruction of a formal sort are beyond the reach of the majority of Peruvian *Quechua*. Very few Indians learn Spanish and fewer learn to read and write even poorly. Perú's population of 15 years of age and over totals to 3,595,800 of which 57.6 percent (2,071,637) are illiterate (Estado de la Instrucción en el Perú, 1942, p. 55). The national coefficient of illiteracy is given at 35.15 percent. As regards the school-age population of 1,464,664, only 35.15 percent of the children are receiving some type of instruction, while 64.85 percent are receiving none at all (ibid., p. 11). This situation is further clarified by the following table:

TABLE 3.—*Peruvian population data* [1]

Region	Total population	Populated places	School-age population		
			Total	With instruction	Without instruction
	Percent	*Percent*	*Percent*	*Percent*	*Percent*
Coast	34.35	14.93	33.60	51.51	23.89
Sierra	60.28	77.42	60.60	40.71	71.39
Jungle	5.37	7.65	5.80	7.78	4.72

[1] From Estado de la Instrucción en el Perú, p. 15.

The Sierra, although it is the most densely populated region of the country with the largest number of populated centers, is the most lacking in educational facilities. Enormous areas are to be found in which not one school exists. In some places, *Quechua* communities attempted to fill a sharply felt need by establishing classes in Spanish at their own expense. But these schools were soon abandoned. The Mestizo teachers, who had not completely mastered the alphabet, lost heart when they were unable to collect the pittance they were promised. The children, on the other hand, lost whatever interest they had at the outset as a result of the miserable instruction. Recently this type of school has been banned by the Government and each community willing to build a schoolhouse and maintain it is guaranteed a Government-paid teacher.

In those places where the Indians have access to schools, language proves to be an insuperable difficulty for the *Quechua* students. Instruction, in practically all cases, is given in Spanish. The *Quechua* students are unable to follow it and, after a brief but unsuccessful effort, are satisfied to devote themselves to tidying the school grounds and to physical education. Meanwhile, the teacher can concentrate his best efforts in behalf of the handful of Mestizo children who come from Spanish-speaking homes. The teachers themselves complain of the situation, but there is no remedy until a system of education using *Quechua* as a medium of instruction is put into effect.

Everywhere there is an emphasis in education of males as against females. This is most noticeable in the Departments where the Indian is predominant and is explained by the *Quechua's* conservatism in matters of sex status. In the Puno schools, there are 422 males to 100 females; in Apurímac, 382 males to 100 females; the figures for Cuzco, which are approximately average for the country, show 231 males to 100 females; Lima schools have the lowest ratio with 100 males to 126 females.

RELIGION

Quechua religion today is essentially a special form of Catholicism (pl. 100). The Catholic ritual and theology has penetrated to the most isolated *Quechua* communities. Most of the surviving non-Catholic elements are coated over with a Catholic surface.

Just as in peasant Europe Catholicism was combined with local pagan worship, so the pre-Columbian religious forms throughout the Americas were frequently absorbed in local church practice. The problem is complicated here in that already specialized brands of Catholicism born in the peasant districts of Spain were further modified and amplified by the local religions in the New World and by internal historic changes. To disentangle the various elements and to place each historically and geographically requires control of both the American and Spanish sources.

It has been pointed out elsewhere (Mishkin, 1940 a) that the modern *Quechua* have not developed a highly integrated religion. The elements often do not jibe; there is no attempt to relate one element to another. In distinction to typical Mexican, or let us say, Guatemalan examples, *Quechua* religion appears to be a loose jumble of beliefs, ideas, and practices, disconnected and unsystematized.

Be this as it may, *Quechua* religion is not a negligible factor in the life of the community. The supernatural beings are closely involved in the economic and social life of the inhabitants. Ritual and ceremonialism are allied to the most practical and serious objectives of men and women. The public ceremonials are pivots and high points of communal life. Magic and curing enter into the whole field of human relations. Moreover, outside of Government, the Church is the only other great constant whose pressure is felt in every community.

The supernatural.—The supernatural beings of the *Quechua* fall into various classes. There are the good and the bad spirits, the terrestrial and the celestial, the deities as opposed to spirits, a Catholic pantheon, and the pagan assembly of good, bad, and ambivalent beings.

God is a recognized deity in Kauri and is given a high place in the local pantheon. Although God is certainly a primary deity, one belonging to the first order of supernatural beings, he is not necessarily supreme. According to some informants, Christ is really the master of God. The two reside in heaven and live together on good terms. Some people say that God and Christ are one and the same and, often, both are equated with the Sun, Inti Huayna Capac. The Sun (or God) brings heat to the earth and its inhabitants, protects the people and the land, granting good health to the one, productivity to the other. The Sun, unfortunately, is subject to the vicissitudes of human fortune—especially illness, which is a source of danger to the people on earth. For the Sun's illness can be communicated to the water on earth and all drinking water may be contaminated. Hence, those on earth must watch for the appearance of rainbows, which indicate that the Sun has sickened, and hasten to store up drinking water for future use.

These two, or perhaps three, deities (they may constitute one in a trinity) stand at the top of Kauri's supernatural world. However, they are so far above it, removed from it, that they play a minor role in mundane affairs. They are truly detached deities having little to do with man and his problems, nor are they concerned with his daily struggles and his relations to the lesser divinities. They have a nodding acquaintance with the Aukis, the mountain spirits. That is all. The other spirits, good and bad, are practically unknown to them. There is no cult associated with the higher deities except that they are referred to in the morning prayer, The moon, likewise, attracts little attention; again, there is no moon cult. The moon is, incidentally, regarded as a masculine god who frequently sickens, dies, and is revived. He does not influence agriculture.

The chief difference between the higher and lower divinities is that the latter can be manipulated by those with the special power to do so. Aukis and Apus can be manipulated. They are superior spirits, residing in local mountain peaks. In some parts of southern Perú, the Apu is taken to be the guardian divinity of a region, while Auki is the name given to spirits related to cultivation (Delgado, 1931). In and around Kauri, the terms are used synonymously, or at least they belong in one class in which the Apu has slightly superior status. There is a belief widespread in the Peruvian Andes that mountain peaks inhabited by Apus and Aukis have concealed within them great palaces and haciendas together with herds of livestock guarded by the servants of the spirits (Castro Pozo, 1924, pp. 209 ff.). Among these animals are to be found condors, which are the spirit's chickens; vicuñas, his llamas; and the Ccoa, his cat. The Ccoa (sometimes called Cacya in Kauri) is easily the most active of the spirits, the most feared and the one most intimately involved in the daily life of the people. The Ccoa brings lightning and hail; destroys the crops and kills with his lightning. This malevolent spirit is the sponsor of the sorcerers, choosing those who are to serve him and providing them with the power of sorcery. It is said that people are divided into two classes: those who serve the Ccoa and those who fight against him. The former are rich; their fields are never injured by frost or hail: the latter are poor; their fields yield poorly, and the members of their families are often ill.

The Ccoa is usually described as a catlike animal standing some 16 inches (40 cm.) high by 24 inches (60 cm.) long, gray in color with black stripes running the length of his body. His eyes are phosphorescent; his tail about 12 inches (30 cm.) long and 1¼ inches (3 cm.) in diameter. His head is somewhat larger than that of the ordinary cat, and he is most often seen with hail running out of his eyes and ears. The Kauri view is that the Ccoa lives at Ausangate, one of the highest peaks in southern Perú and only a few kilometers away from the village. There in the rainy season the Ccoa prepares for his journeys for the collection of the harvest. The hail is his method for stealing the crops at harvest time.

The most characteristic feature of the Ccoa is his anger, which can be palliated by proper offerings. A typical offering to the Ccoa consists of a combination of wine, incense, gold and silver tinsel, llama tallow, ccañihua, and huairuro (a tropical seed product), which is burned on some high ground. Sorcerers, since they are men who have entered into contract with the Ccoa, must be especially careful to make proper offerings or they will be struck dead. The Ccoa will do his worst when he receives unsatisfactory offerings made by sorcerers, when infants die without being baptized, and when people attempt to fight off the hail. Whether the Ccoa can act independently or merely follow the instructions of the Aukis is a matter on which there is considerable disagreement among informants. Moreover, some informants rule out the Ccoa altogether and substitute Santiago, who is an ambivalent deity, causing the hail and lightning on one hand and protecting crops on the other.

The only malevolent spirits in Kauri are those of infants (the duendes) who die or are destroyed before baptism. These may be highly dangerous to the parents and to the whole community. Their bodies are usually taken to the hills by old men, who cannot be harmed by the duendes, and there burned. The ash of the male infant can be used as a cure against soccahuayra (illness caused by malignant winds), a match-box full selling for 15 centavos. The ash of the female possesses no curative properties and is thrown into the lake. If the unbaptized infants are buried, it is believed that Ccoa will eventually find them, strike the spot with his lightning, and carry off the duendes to Ausangate to be his servants.

The souls of the dead are consistently good spirits. In Kauri theory, man is composed of three parts: the charan cuerpo (wet body), the flesh; the soul (alma), which resides in the skull; and the spirit (animo), which goes to live in heaven after the man has died. The spirit returns to earth only one day each year, on All Souls' Day (November 2), and occasionally offerings to the dead are made on this day. The soul is a kind of guardian spirit giving protection to men and their works. It safeguards a man while he is on a journey, it defends him against attacks of the malevolent spirits, and assures him of good harvests. Many people keep skulls in their houses, not necessarily the skull of a relative, obtained in an old cemetery a short distance from the village. At night the souls residing in the skulls grow very active, carry on conversations among themselves or with the souls of the living, arrange fiestas for themselves, and dance. A man's soul may wander about a great deal while he is alive. If one awakens with a heavy head, it is a sign that the soul has been on a journey and has grown weary. It is said that the souls of the living may be captured by the spirits in the earth, and then the body without its soul will pine away and die.

These spirits in the earth constitute an important part of Kauri's supernatural world. They are the souls of the wicked people who lived on earth before the coming of the Sun. The majority of them at that prehistoric time made war on Inti Huayna Capac, and were burned to death. A few, those who did not take part in the war, were transformed into the underground spirits and cause socca, tiera, and other diseases coming from the earth. They are to be counted among the place spirits.

There is not a great deal of cult established around the souls of the dead. In Junín, Puno, and Piura offerings are made at tombs and there are dances at burials. (See Castro Pozo, 1924, pp. 158–159 ff.) In Kauri, there is no cult of huacas of any kind, but the custom exists of rendering homage to the dead at graves along the road. The ancient graves in the region, called tombs of the gentiles, are feared but no offerings are made at them.

Public ceremonies: Fiestas.—The fiestas are conceived by the Indians primarily in terms of the religious offices associated with them (pl. 99). A number of the offices belong to the Fiesta of Corpus Christi,[7] which is among the most important of the Fiestas celebrated in Kauri, and are as follows:

(1) *Fundadora.*—The office is held by children. One week before Corpus, a boy appointed by the priest visits all the houses of the community bearing effigies of the saints. This is regarded as a public reminder of the coming holiday. The

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[7] Corpus Christi, being one of the movable holidays, falls in May or June.

boy holding the office must supply food and drink to his helpers, and pays 40 centavos to the priest as tax for the "cargo."

(2) *Chunchu Tusuc* (*dance of the savages*).—This office is held by boys of 15 designated by the priest. It involves participation in a dance performed by some 12 boys in a special costume including a leather headdress, in Corpus. Expenses connected with the office total to 6 soles.

(3) *Chaupi Capitán* (*captain of the center*).—This is danced by 16-year-old boy as a special feature of the Chunchu Tusuc. He contributes 40 centavos toward the Mass and about 6 soles to cover the rest of his obligations.

(*4*) *Quepa Capitán* (*captain of the rear*).—This is danced by a 12-year-old in the Corpus dances. This "cargo" likewise carries with it the obligation of contributing toward the Mass as above and some 6 soles for food, drink, etc. The contributions for the Mass paid by the Chaupi Capitán, Quepa Capitán, and Ararihua (below) are handed over to the priest in behalf of the Mayordomo of Corpus and go to defray the cost of their Masses.

(*5*) *Ararihua* (*he who cries out*).—He is the chief assistant of the Chunchu Capitán at Corpus. His expenses also total to 6 soles.

(*6*) *Albazo.*—The office is performed by an 18-year-old youth. The holder of the office arranges for a band of masked musicians to march about the community on the morning of Corpus Christi. The expenses involved run to 30 soles.

(*7*) *Corpus Mayordomo.*—There are four Mayordomos of Corpus Christi, who must supply the music, food, drink, and coca for the fiesta proper. Two Masses are held by the priest (24 soles). The total cost for the four Mayordomos is estimated at 160 soles.

In addition to Corpus Christi, the following major fiestas are celebrated in Kauri: Exaltación (Kenosis or Exaltation of the Cross), September 14; Rosario (Virgin of the Rosary), October 7; Santiago, July 25; Immaculate Conception, December 8; San Andrés, November 30; Holy Week (last week of Lent); and San Juan, June 24. The religious offices associated with the fiestas are listed as follows:

Señor Exaltación Mayordomo.—There are two of these Mayordomos who hold the office for 2 years. The Exaltación Mayordomos supply food and drink for the 3 days of fiesta. Each pays 6 soles for the Mass; the expenses to be met by the Exaltación Mayordomo run to 40 soles. Another office was previously associated with Exaltación, the Torero Cargo. The holder of this office had to bring bulls from the neighboring haciendas and provide a banquet for the whole community, the cost running to 40 soles. The Torero Cargo has become extinct in recent years.

Mayordomo del Yanacuy.—This office is performed 2 years in succession during the harvest of the Virgin's plots. (See Agriculture.) The Mayordomo serves as "pongo" (home servant) in the house of the priest for a period of 3 weeks. In the fiesta itself, he arranges for the entrance of the "alba," which consists of a mule carrying the Peruvian flag flanked by an Indian couple, one dressed as a soldier, the other as a Mestizo. The couple dances throughout the night, after which a feast is provided by the Mayordomo. He is paid 5 centavos by each person attending the feast. Immediately after the feast, the dancers put on the cacharpari (farewell).

Rosario Alférez.—The function of the Rosario Alférez is merely to contribute to the cost of the Mass. There are seven men who hold the office, each paying 5.60 soles.

Rosario Mayordomo.—The Rosario Mayordomo supplies the musicians and dancers for the fiesta; he also arranges a rodeo to be held in the community.

The offices belonging to the fiesta of Santiago are: Señor Mayordomo, Altarero, and Santiago Alférez.

Señor Mayordomo.—The Señor Mayordomo is in charge of the "alba" entrance, the soldier and Mestizo dancing as they pull along the mule. A third Indian sets off the accompanying fireworks. Beforehand, the Mayordomo of Santiago serves as "pongo" in the house of the priest for some 4 weeks. He also provides a feast for which he can charge his guests 5 centavos. At the Mass, the holder of the "cargo" occupies the place of honor, together with the Alcalde. These two titles carry with them the exclusive privilege of kissing the "pástico," a special effigy fitted with a silver cross. After the Mass, the officers lead the procession into the plaza of the district capital, where feasting and dancing are to be held. The expenses involved total to more than 100 soles.

Altarero.—The Altarero builds the altar. There are four altars for the fiesta, each altar being constructed and tended by two Altareros. Each pair of Altareros must hire musicians who play at the altar for 3 days and nights. It is around these altars that the young couples, who are about to enter into trial marriage, dance, flirt, and drink. The Altarero stands the cost of the aguardiente and chicha to the extent of about 100 soles.

Santiago Alférez.—Usually two to four men act as Santiago Alfereces whose function is to contribute to the cost of the Mass and feasts. The cost is 30 soles for each Alférez.

The fiesta of the Immaculate Conception offers two offices: the Concebida Mayordomo and the Alférez Concebida.

Concebida Mayordomo.—There are two Mayordomos officiating at the fiesta. The alba is also used in this fiesta but in addition a troup of dancers with blackened faces, called negros, perform before the door of the church. The church has been previously decorated with flowers. Feasting and drunkeness follow the Mass, and the fiesta is again closed with the cacharpari. The cost for each Mayordomo is 25 soles.

Alférez Concebida.—Two or three men take this "cargo," contribute a share to the Mass, and provide some food for the feasting. Each contributes some 8 soles.

The fiesta of San Andrés is held at the capital of the district, Ccatcea. The two men who hold the "cargo" are called "Alma Alférez" and wear a skull mask. After the Mass in the church at Ccatcea, the party adjourns to Kauri for the festivities. Chicha is drunk from queros (ancient wooden cups) and a mock bullfight is put on for the entertainment of the souls. The Alma Alférez spends in the neighborhood of 50 soles in discharging the obligations of his office.

Two offices which have become extinct in recent years are the Pucelay Alférez and Ramos Runa. The former was associated with carnival, the latter consisted in gathering palms for distribution in the community during Holy Week.

The fiesta of Estantare in which a Mass is offered to the Virgin of Sorrows is held in Ccatcea during Holy Week. The Carguyoc distributes baked apples to the crowd at the capital and later offers a lunch in Kauri. Estantare is one of the minor fiestas.

Adoration of the Cross, on Good Friday, is observed by bringing together five of the crosses of the community in the house of Mayordomo of the Cross. The latter arranges for a band to play before the crosses and invites the general public in to worship. Those who wish bring offerings of coca and aguardiente. Later, the crosses are carried to the church and the dancing begins.

The above-mentioned fiestas are given differing degrees of importance and the offices to be filled seem to be graded in an hierarchical order. One succeeds to one office after another until at the end the devotee reaches the culmination of his career as Mayordomo of Rosario and Santiago. In the lower offices, strict age-grading is apparent. The boys who have completed Fundadora, on reaching the age of 15, pass to membership in the dance troup of Chunchu Tusuc and, later, at 16, are designated Chaupi Capitán; at 17, Quepa Capitán; at 18, Albazo; and so on. Those who as mature men serve in the higher offices have usually climbed all of the lower rungs of the ladder.

A glance at the financial note accompanying the catalog of offices shows the enormous cash outlay the religious careerist must provide. The total cost of participation in all the offices of the yearly calendar of fiestas is put at about 700 soles. This, of course, takes no account of time expended, of obligations incurred as a result of receiving help from relatives, and of the weeks of free service given the priest. This sum is, moreover, a modest estimate; many men double and triple their expenditures in an effort to outdo others and gain more prestige. Having completed the round of religious office holding, the Indian may then take the alcaldeship—a post which also has financial obligations of a serious kind. It is quite apparent why the religious career spells financial disaster in so many cases. Yet, once the first steps have been taken along this road it is almost impossible to turn back. He who does manage to extricate himself from the cargos and surrenders the unwanted glory must confront unfriendly neighbors.

There is another order of fiestas which has no relation to the cargos and is not sponsored by the Church. These fiestas are the fertility rites for sheep, llamas, and cattle. The night of St. John's is called oveja velacuy. Bonfires are started in the vicinity of the gate of the sheep corrals; chicha, coca, and aguardiente are held in readiness for blessing the sheep. Meanwhile, young couples go from house to house where there are sheep and dance to the Charango (a miniature mandolin). The dance is called ronda ccashua; the couples are grouped into teams of four, six, or eight dancers. Having arrived at one house, the dancers put on their show and are treated to chicha and aguardiente. They then proceed to the next, where the same performance is repeated. The dancing and festivities continue till dawn. Sexual license for the young couples is recognized.

The day of Santiago is marked by the Fiesta of the Llamas. All of the llamas are given a little chicha to drink on this day so that they may have strength. The fiesta has been little developed, since llama breeding has only recently been resumed in the region. St. Marks (April 25) is the day on which fertility of cattle is celebrated. A little aguardiente is poured over the cattle and a coca offering is made to the Apus, spirits of the mountains, to guard over them.

Sorcery and curing.—*Quechua* sorcerers are capable of performing good magic and black magic; they are at the same time diviners and practical physicians. Three classes of spirits enter into curing and the practice of sorcery: the Ccoa, the Aukis, and the spirits of the former gentiles inhabiting the lower portions of the earth. First, the Ccoa selects and gives power to the sorcerer by striking him with lightning. The Aukis are called upon by the sorcerer to help him with his curing. Finally, in order to effect a cure the sorcerer must combat the evil spirits of the gentiles, who are responsible for the more serious diseases.

In most *Quechua* communities there are to be found the superior sorcerers called alto misayoc and the inferior sorcerers known as pampa misahoc. The superior sorcerers are those who have been struck by lightning three times, according to Kauri informants. The inferior sorcerers are struck by lightning only once. Both kinds of sorcerers can practice black magic and divination, can cure and can combat black magic. The essential difference lies in their relationship to the spirits. The alto misahoc can converse with the Aukis, which is their principal method of divination. The pampa misahoc is guided solely by the Ccoa. Women as well as men can be sorcerers. It is said that the women are sorcerers of the left, while men are sorcerers of the right; the former are more powerful.

In August when the earth is alive, various kinds of stones are thrown up which are used as amulets. There are seven major classes of stones called: Mijuy cuyac (for food), uyhua cuyac (for cattle), oveja cuyac (for sheep), llama cuyac (for llamas), huaca cuyac (for cattle), pampa misa cuyac (for inferior sorcerers), and alto misa cuyac (for superior sorcerers). The last two get their names from their shape, pampa misa referring to a low table and alto misa to a table with legs. In order to discover whether a stone has magic properties and to which class it belongs, one must consult a diviner.

The methods used in curing are numerous, and vary in accordance with the favored technique of the curer and the region from which he comes. In Kauri, curing by invoking of the Aukis is a common method. The brujo enters a sickroom in which there is a table holding a bottle of aguardiente, coca, sugar, a whip, and 20 centavos. A piece of white paper is put on the ground. The brujo darkens the room and calls on his tutelary Auki. The door is closed, the brujo whistles three times, and the Auki responds by entering through the roof and settling on the white paper. Then, by the aid of ventriloquism, a conversation is held between the brujo and the Auki in which the Auki reveals the cause of the illness and advises a remedy. Moving his wings, the Auki leaves again by way of the roof. At times the Auki strikes the brujo and the sick one with the whip. After this performance, the brujo lights the room, finishes the things on the table left by the Auki, takes the 20 centavos, and departs.

Curing is also done by means of colored clays. The patient is first massaged with red clay, then with black, then with blue. The three clays are then put into a vessel of boiling urine, and the brujo discovers the cause of the illness from the resulting vapors. In some places the guinea pig is used for this kind of divination. The animal is beaten against the patient, then skinned and examined in order to make a diagnosis and prescribe the cure (Castro Pozo, 1924, pp. 266 ff.).

Diviners are much used in cases of robbery. The divination is usually done with coca supplied by the client. The leaves are thrown into the air over a cloth or shawl, and the direction in which the thief has gone is determined by the moving of the leaves. Payment is made in accordance with the value of the objects stolen. If the divination proves efficacious, extra payment is made.

In some regions (Piura and Lambayeque) sorcerers act in assembly in behalf of their clients, but apparently the more common case is for the brujo to act alone.

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THE ANDEAN CALENDAR

By Luis E. Valcárcel

There is not the least doubt that the *Inca* had a calendar. All the chroniclers of the 16th and 17th centuries are very exact about referring to the months by their indigenous names and relating in detail both the farm labor and the religious rites that pertained to each month. The *Inca* people were agriculturists par excellence, and the most important thing for them would have been to fix the approximate dates for the principal events relating to their work in the soil: the sowing, the watering, and the harvest.

Their calendrical system was based on observations made in the capital of the Empire, Cuzco, and it applied principally to the Sierra. The special physical conditions of this great Andean zone were controlled by the two fundamental periods of rainfall and drought. Unlike other regions of the earth, neither spring nor autumn were so well marked as winter and summer.

Information on the procedures followed by the Peruvians in fixing the bases for their calendar is neither consistent nor explicit. To establish those bases, however, they must have possessed a knowledge of astronomy. There is not the least doubt that they had such knowledge because the movements of both the sun and moon were taken into account in their calendar, although the method of correlating the two is unknown. Four towers, two close together and two far apart, were built in a row along the horizon. From a central point in Cuzco, the movements of the sun could be observed with reference to these towers. By this means, planting times were determined and the agricultural cycle begun. Some have claimed that similar towers were used to determine the equinoxes and the solstices and even the solar months of the year. Although this is possible, there is no indication that use was made of such observation in the festival calendar. Instead, the latter was basically a lunar calendar. Others have considered certain pillars carved from natural boulders as sundials, but it seems unlikely that they could have been so used.

The *Inca* believed that on those two great days of the equinox the Father Sun came down to live among men. This belief survives among the Indians who live today on the Island of the Sun (Isla del Sol) in Lake Titicaca, one of the greatest sanctuaries of pre-Columbian Perú. As proof that the Sun visited the island in human form, they show with great veneration the footprints left by his feet in a rock pavement. Two prints of great dimensions can still be seen in the pavement.

Zelia Nutall (1928) observed that the time between the equinoctial days in Lake Titicaca corresponds to the period of human gestation, that is, 9 months. In the myth, the Sun descends to live among men, and impregnates a woman or several women, who bring forth their offspring so that their divine spouse will return.

Since each month was the occasion for some fiesta in the ceremonial calendar, certain correspondences with February 14 and October 30, the days of the equinox, and June 21 or 22 and December 21 or 22, the days of the solstice, naturally occur. The major celebration dates were called Raymi, the name of the festival or principal dance. In June, Intip Raymi, festival or dance of the Sun, was celebrated. In December, Kapaj Raymi was the principal festival. In October, Uma Raymi, the water festival, coincided with the date of the coming of the rains. In February, although the 14th should be the date of the other "descent" of the sun, there was no Raymi. The only author who places the festival of the Kin or Inka Raymi in April is Poma de Ayala (1936). Instead, the fourth date, as cited by the majority of the chroniclers, is Koya Raymi or festival of the Queen, which falls in September.

Only two seasons are named in the *Aymara* language: Jallu Pacha, the rainy season, and Lupi or Auti Pacha, the dry season. *Quechua* also has names for only two seasons: Paray Mita and Rupay Mita.

In addition to solar and lunar observations, the *Inca* also used observations of certain constellations, such as the Southern Cross or Chakana, according to some still unpublished studies of the Peruvian astronomer, Colonel Gerardo Dianderas.

The *Inca* calendar may be closely compared with the Gregorian calendar of the Catholic Church, which prevails in Andean towns. The most plausible correlation places the beginning of the year between the last days of December and the first days of January. Here is the corresponding table:

TABLE 1.—*Comparison of* Inca *calendar with Gregorian calendar of the Catholic Church*

Gregorian months	Peruvian months [1]	Translation
1. December	Kapaj Raymi	The principal festival.
2. January	Juchuy Pokoy	The small ripening.
3. February	Jatun Pokoy	The great ripening.
4. March	Paukar Waray	The garment of flowers.
5. April	Ayriway	Dance of the young maize.
6. May	Aymuray	Song of the harvest.
7. June	Inti Raymi	Festival of the Sun.
8. July	Anta Situwa	Earthly purification.
9. August	Kapaj Situwa	General purification.
10. September	Koya Raymi	Festival of the Queen.
11. October	Uma Raymi	Festival of the Water.
12. November	Ayamark'a	Procession of the Dead.

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[1] See p. 308, this volume, for alternative names.

The determining factor in this sequence of month names is the cultivation of maize, as is clearly seen in the names for January, February, March, April, and May, which graphically indicate the progress of the plant from its early ripening to the harvest. In June come the thanks to the Sun God for the abundance of the harvest; in July, the rites of clearing and purifying the lands; in August, the purification of men and villages; in September, the lunar or maternal rites under the patronage of the Queen; in October, the prayers and liturgy for the coming of the rains; in November, the blessing of the fields for the mummified dead, or Mallkis (resinous trees); and finally, in December, the great festival that climaxes the economic, religious, and magic labor performed to assure the fruitfulness of the earth, which is now "charged" with the duty of providing food. Guaman Poma de Ayala, Gutiérrez de Santa Clara, Cabello de Balboa, Cristóbal de Molina, the *Inca* Garcilaso de la Vega, Diego Fernández el Palentino, Juan de Betanzos, and many others among the principal chroniclers agree on the names of the months, with slight variations, as well as on the kind of work, particularly agrarian, and the rites that belong to each (Poma, 1936).

Public performance of the old rites has been suppressed, but the Indians still carry on the majority of them with notable vigor, surreptitiously or under the mask of the Catholic rites. Many studies have been made of this subject. The following generalization seems to apply particularly to Cuzco and the Sierra:

At the beginning of the year, Kapaj Raymi is preserved in the Catholic commemorations that begin December 25, Christmas, and end January 6, on the Feast of the Three Kings, or Epiphany. Inti Raymi is reproduced with remarkable fidelity on Corpus Christi Day, a feast occurring on a variable date between the end of May and the middle of June. The procession that takes place in Cuzco is a replica of the one held in the *Inca* festival in the very same plaza of the capital of Tawantinsuyu. Koya Raymi, the Feast of the Queen, coincides with the Feast of the Nativity of the Virgin on September 8. Some pagan rites are celebrated at night, especially in purely Indian villages, such as Chincheros, near Cuzco. Uma Raymi is ostensibly celebrated in October with the feast of the Virgin of the Rosary and of San Francisco de Borja on the 8th and 10th; it is the month of the "rogations," when children weep at the doors of the churches and bells ring in the bell towers.

Each month has its special festivals, on which the Indian puts the stamp of his old rites. January has the feast of St. Sebastian on the 20th and of the Virgin of Bethlehem on the 24th. February has Candlemas on the 2d and Carnival in which celebrations and feasting are universal. Sometimes when the calendar so signifies, the 3 days of Carnival are celebrated in March; and in Holy Week, which occurs in either March or April, there are practices that recall the ancient religion. On May 3, the day of the Commemoration of the Cross throughout the Sierra villages, the beginning of the harvest is observed. It is preceded by a vigil (Cruz-velacuy), recalling the *Inca* "pakariko." At this time, and later, the "Ayriwa" is danced, and a tree laden with fruits and gifts is erected. These are shaken down at the end of the dance. Then follows the "Aymuray," or song of triumph; and then the "Haylli" or "Haycha" is sung by the harvesters.

In July, when the earth is a copper-red color (Anta), ancient rites begin on the 16th, Feast of the Virgin del Carmen, to cleanse the fields of all impurities. These ceremonies continue until the 25th, the Day of St. James (Santiago), patron saint of Spain. Penance and other expiatory acts start August 2, the Feast of Our Lady of the Angels; but the 15th, Day of the Assumption of the Blessed Virgin, and the 16th, the Feast of San Roque with its magical practices, have the greatest religious importance.

November brings a remarkable coincidence, for it is the month of the dead for both the pagan Indians and the Catholics, the latter commemorating the departed on the 2d, All Souls' Day. The cemeteries are filled with the devout, who place rich food on the tombs of their dead ones. The procession of the "Mallkis" is no longer held because the practice of mummification has died out; but in the invocations and prayers the protection of the dead is asked to assure good crops.

In addition to these principal dates, many others are more or less widely celebrated, and there are innumerable local festivals in honor of the patron saints of all the villages. The Spaniards did not leave even the most insignificant inhabited place without the protection of some saint. In all the festivals held in provincial villages of large Indian population, the pre-Columbian dances have merged with those of Spanish origin, and with the bullfights, cock fights, horse races, and other forms of celebration. Mestizo dances, new dances created by the Indians—some of them satires against their dominators, such as the "Sijilla," and the majority characterizing foreigners, such as Negroes, Chileans, Majeños, Chapetes, or Chunchos—have special places set aside for them in the plazas and streets of the festive town, and real contests develop. And along with the pomp of the Catholic rites are all the active transactions of the fair, and the "Devil," represented by an Indian, drives the dogs away from the church with a whip. Until a few years ago, allegorical and religious plays were given in the *Quechua* language in the atria of the churches. On certain days, such as the 1st and 6th of January, the Indians chosen as leaders violated the prohibition against mounting horses and rode the most spirited young animals belonging to their masters. On Good Friday night, all the taboos disappear; there is robbery and unrestrained carnal indulgence. On the two successive Thursdays immediately preceding Ash Wednesday, and on Holy Innocents' Day (December 27–28) the broadest kind of jokes and pranks are permitted.

Tuesdays and Fridays are Chiki, or sad, ominous, unlucky days, especially Tuesdays, and so also are the following: January 11, 15, and 20; February 1, 7, and 8; March 15, 16, and 20; April 7 and 15; May 7, 15, and 17; June 6; July 13 and 15; August 1, 18, and 20; September 15 and 18; October 6; November 15 and 17; and December 6 and 7.

Of the more general Catholic feast days, we have Easter, Carnival, Holy Week, Pentecost, and Quasimodo (Low Sunday), Corpus Christi, Candlemas, the Assumption of the Blessed Virgin, Christmas, and the Immaculate Conception. These, together with some others, are the principal feasts of the Church. Other feast days celebrated because of special circumstances are the following: St. Isidore the Farmer, May 15, patron of farmers; St. John the Baptist, June 24, patron of stock raisers, especially sheep raisers; Sts. Peter and Paul, June 29, the former being the patron saint of fishermen; St. James, July 25, who is identified by the Indians with the Lightning (Illapa); San Lorenzo, August 10, and San Roque, August 16, who are connected with magic; St. Jerome, September 30, patron of many towns and doctor of the Church; San Francisco de Borja, a Jesuit through whose intercession instruction for the Indians was begun, October 10. (In Jesuit parishes and missions, July 31, the feast of St. Ignatius Loyola, is celebrated, while, for similar reasons, other congregations celebrate the day of St. Dominic, August 4; St. Augustine, August 28; and St. Francis of Assisi, October 4.) In November, St. Andrew's Day is celebrated on the 30th. The days of the four Evangelists are: St. Matthew, February 24; St. Mark, April 25; St. Luke, October 18; and St. John, December 27.

The calendar which governed the period of about 1609 to 1613 is interesting. Poma de Ayala (1936) has recorded all the feast days then in effect. Many of them have now disappeared and been replaced by more "fashionable" saints.

It is evident that the number of holidays under the Spanish dominion and in contemporary times surpasses that celebrated by the ancient Peruvians. Consequently, the time the latter could devote to work was much greater and their production was 10 times more than that of present days. Besides the 52 Sundays, observed as nonworking days in the Catholic calendar, at least as many more days can be counted which the Church requires to be dedicated exclusively to its rites. That is to say, a third of a year is rendered inactive for religious reasons.

The influence of the fiesta on the life of the Indian community is very great. It can be said that the entire population hangs on the approaching event and carries out preparations from one year to the next. The motivation of the fiesta is similar to that underlying the potlatch of certain primitive groups; for these celebrations provide opportunity for competitive expenditure of wealth. The Majordomo, or "Carguyoc," the person responsible for the success of the affair, has to devote the greater portion of his time and all his resources to it in order to succeed. When the great day arrives, the entire community and every stranger who may be present are the guests at splendid repasts of food and drink, which go on for a week. Not only are the products of local industry consumed, but others are imported from the city. Each Majordomo tries to dazzle people with his excessive spending, because he will thus gain prestige, and his stewardship of the fiesta will always be remembered and held up as a stimulating example to those who follow him. The Catholic priests are present at these affairs performing a multitude of ecclesiastical rights for fees. Efforts have been made to suppress or at least mitigate such excessive expenditures, but these fiestas are an escape valve for a closely regimented people, providing an opportunity for consideration and prestige within their own group. They thus nourish the Indian spirit.

With regard to the smaller divisions of time into week and days, there is only a small amount of inexact information about the *Inca* period. It is known that the *Inca* knew the phases of the moon and, consequently, the week. But Montesinos assures us that the *Inca* week consisted of 10 days and the year of 12 months of from 3 weeks to 10 days, with a surplus of a half week of 5 days, called the "little month," in which the intercalary days would also be included. The subdivision of the day was based on the movement of the sun in its three principal stages: the rising or coming up, the zenith or midday, and the setting or decline, which were called, respectively, Anti, Imti, and Konti.

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INDIAN MARKETS AND FAIRS IN PERÚ

By Luis E. Valcárcel

Markets, one of the economic practices of the native population of Perú, have been held from pre-Columbian times, through the period of Spanish rule (16th to 19th centuries), up to the present. During this time, their importance not only to the Indian communities but to the peoples of the Peruvian Sierra in general has not decreased. The periodic markets are now adjusted to the Catholic calendar. There are ordinary ones every week and more pretentious ones on certain holidays. The latter are well-attended, celebrated fairs, at which the greatest commercial transactions of the year take place. They bring into contact the different zones of production and the most distant towns, not only of the present territory of Perú but even of the neighboring territories of Ecuador on the north and Bolivia on the south. Thousands of persons attend them, including, of course, the Mestizo and White merchants who do business with the Indian producer. These fairs, like the Sunday markets, take place in close connection with the rites of the Catholic Church: the former at the festivity of the saint of the day, and the latter at the weekly High Mass, which the Indian parishioners have been obliged to attend since the 16th century, when, as today, coercive measures were used by the ecclesiastical authorities. The chief purpose in establishing settlements (reducciones)—new towns where the Indian converts from the villages were gathered—instituted by Viceroy Francisco de Toledo in 1572, was to facilitate the attendance of Indians at religious ceremonies, the first being the Sunday Mass.

In the *Inca* Period, just as up to the present time, the ordinary markets were called "katu," and in Cuzco, the Indian women who have selling booths are called "gateras" (kateras). The Spaniards, introducing the word from México and Central America, called the markets "tianguez," a term by which Colonial historians frequently refer to them. Then, as now, the town plaza was the meeting place. Markets were, according to their importance, held in the principal plaza and in various neighboring ones, e.g., in Sicuani, a city located in the Department of Cuzco.

In former times, transactions were limited to direct exchange or barter of certain products for others, e.g., maize for quinoa or potatoes, or for chili and salt. Such transactions are still carried out, including silent exchange, in which the buyer and seller, without uttering a word, place the articles or products to be exchanged side by side, the deal being definitely concluded when, also silently, the trade goods have changed hands; or, when both persons withdraw in silence, the exchange having been called off. Another curious custom is the "tinkuchi," wherein it is mandatory that the purchaser of one object also take another as a sine qua non for consummating the transaction. In such cases, the extra article is something in little demand, which is acquired by means of this maneuver.

Apart from the fixed markets, there is itinerant or house-to-house selling of products such as cheese, milk, cooked maize, and others. These are domestic vendors, i. e., by customary right they are habitual providers of certain homes in the town and even in the city. There are also vendors who set up their stands in a somewhat nomadic fashion in strategic places. These may be seen in Lima, the capital of Perú, at certain corners of plazas and streets, where the Indian woman offers roasted beans, peanuts, dried fruits, etc. Less typical are pushcart merchants, whose specialty is fruits in season, sweets, beans, peanuts, and other foods and delicacies. In Lima, the majority of these are boys who are natives of the town of Orcotuna, in the Mantaro Valley. This is their specialty. They have formed a large guild, called the "Sons of Orcotuna," and have definite obligations, such as that of traveling to their town by express train to celebrate the holiday of their patron saint.

A special type of sale is that of medicines of the Indian pharmacopoeia, which are much used by the Mestizo and White populations, especially herbs with recognized curative virtues. The Kollawallas (see Tschopik, The Aymara, this volume, p. 538, under QOḼAWAYU) or Kamilis, who come from a small town of Bolivia, have specialized both as doctors and as vendors of native drugs, particularly vegetable ones, in a truly extraordinary form of nomadism. Today, they are indisputably the greatest wanderers in South America, for they can be seen passing through towns from Ecuador to Chile and the Republic of Argentina, each carrying his pharmacy in a pack on his shoulder. They offer miscellaneous articles of a purely magic value, such as fetuses of the vicuña, puma claws, etc. They stop at fairs and markets, have street stands, and go into homes whose owners summon them with great faith in their curative knowledge. The Kamili, a doctor and magician, is awaited in villages with great anticipation in order that people may provide themselves with the medicaments he carries, and that he may consult with the sick and with persons interested in divination or prognostication, especially with respect to the theft or loss of bulls, horses, burros, llamas, or sheep. Coca is the chief medium which the Kamilis use in these magic acts.

The weekly market is a thing of great and continued importance to the life of communities and towns. The longest are held on Sunday mornings. But, almost certainly because of the need of preventing the buyers and merchants from being dispersed and competing in neighboring regions, a period has been allotted for the market on all weekdays except Tuesday—perhaps because Tuesday is reputed to be an unlucky day. In Huancayo, e. g., the market is held on Sunday; in Huayucachi, the next town, it is on Monday; in Pucara, Thursday; in Chongos Bajo, Friday; and in Chupaca, Saturday. The same occurs in other sections. In the *Inca* Period, fairs were held after the harvest, which, in the Sierra, put them in July, August, and September, the season of no rains. Since the beginning of the Colonial Period, fairs have been held throughout the year, but the most important are always in the dry season. This season was preferred for two reasons: first, recently harvested products could be marketed; and, second, roads were passable, and rivers, which in the rainy season become very difficult and almost impassable in places in the interior, could be crossed. Naturally, many of these obstacles have now been overcome by the daily extension of highways, but even these rarely are asphalted or macadamized, and hence may prevent regular travel.

Transportation continues to be of the most varied types ranging from human carriers and domesticated animals, such as the native llama and the ass, to droves of mules and horses, and carts and trucks, each or all of these being employed according to the places at which the fairs are held. The llama has well-known limits to its travel: it does not go down to the tropical valleys of the east and only occasionally descends to the chief towns of the Coast. Its longest trips are to the salt flats of the Pacific Coast, where domestic salt is obtained. A llama cannot, as a general rule, transport more than about 65 pounds (30 kg).

The coincidence of the dates of the Catholic calendar with those of the principal fairs has been brought about in a very complicated manner, owing to the necessity of reconciling agricultural activities with the Church festivals. (See Valcárcel, this volume, pp. 471–476). In the southern Perú, e. g., the region best studied to date, the great fairs begin on July 16 with the celebration of the fiesta of the Virgen del Carmen, a devotion which is very general throughout Perú. In Pucara, a small town in the Department of Puno, at least 15,000 people meet, coming from the surrounding provinces as well as from Cuzco, Arequipa, and northern Bolivia. This fair features two main products: pottery, of which Pucara is the chief producer, and small horses (veritable ponies) from Chumbivilcas in the Province of Cuzco, where they are bred. Traders from regions where pottery articles are not made, obtain these in exchange for agricultural products, principally maize, which the altiplano does not produce. The horse buyers are "Kollas," a general name for inhabitants of the puna. It is a most exciting spectacle when the horses are being tried out in violent races, with the consequent clashes and spectacular falls. All of a large plaza at this fair is devoted exclusively to the selling of medicinal herbs.

July 25, the day of Santiago Apóstol, patron saint of Spain, whom the Indians identify with the Thunderbolt (Illapa), is celebrated in the frontier town of Santiago Pupuja, where they make the famous "little bulls" (very similar to those of Crete), better known as the bulls of Pucara.

Almost all towns celebrate the fiesta of Carmen (on July 16), when fairs of some importance are held. Somewhat smaller markets accompany the fiesta of Santiago, whom many villages consider their special patron. In the Titicaca region, the fair goes from Pucara to Pomata, where it is held on the 26th, the day of Santa Ana, and journeys on until it arrives at Copacabana, a city on the shores of Lake Titicaca, in Bolivian territory close to the frontier. There it is the best attended; in normal times—before the Chaco war, e. g.—40,000 to 50,000 people came, many even from northern Argentina and from all of southern Perú. It lasts 6 to 8 days from the 5th of August, and the transactions are the greatest recorded in Perú and Bolivia.

Another universal date for fairs is the 15th of August, when the Assumption of the Virgin is celebrated. From the fair of Tiobamba, near Cuzco, to that of Cutervo in northern Perú there is scarcely a populated place of any importance in which the principal market is not set up. The Tiobamba fair sets the price of maize for southern Perú. In Pampacuchu, not far from Sicuani, the fair lasts 8 days, but ordinarily it lasts only 3. San Roque, on August 16, is included in the celebration.

Between the 8th and 14th of September (from the Nativity of the Virgin to the Exaltation of the Cross) the period of fairs is terminated, though some run between these dates. The most important is at the Santuario del Señor de Huanca, Urubamba Valley, less than 25 miles (40 km.) from Cuzco. Thousands of traders attend.

The chief object of trade is maize, acquired especially by purchasers from the altiplano.

Before and after the July-September period, as has been said, a great many fairs are held, the most outstanding days being San Hilario on January 14, the Candelaria on Feburary 2, Godfathers' and Godmothers' on Thursdays in February and March, Easter in March or April, Corpus Christi in May or June, the day of San Juan Bautista on June 24, the fiesta of the Virgen del Rosario from October 8 to October 14 or 15, the Day of San Andrés from the 8th to the 11th and the 30th of November, the Day of the Immaculate Conception of the Virgin on the 8th, and Christmas on December 25. The latter period extends to January 6, the Feast of the Epiphany, which is universally celebrated, as is the New Year, when the new Indian authorities are installed in the towns of the Sierra.

Both natural and industrial products are exchanged in the Indian markets. These are family products, the fruit of the uninterrupted labor of the man and woman, who collaborate closely in agricultural labors and in domestic industries. Both sexes weave or make pottery. While the man plows the land, the woman sows the seed. But business activity is largely entrusted only to women, who comprise 70 to 80 percent of the vendors at markets and fairs. In cities like Cuzco, Indian women provide eggs, milk, and cheese, and men provide firewood or other fuels, such as llama dung (takjia), though women also often carry on such business. Transportation is exclusively in the man's charge when a quantity of bags or bundles are to to be carried on droves of llamas or burros, but the small loads of goods for sale at the market are carried by the Indian woman on her back, with her baby on top, or else on her llama, which is led by a rope around its neck, or on her slow, patient donkey. Once at the trading place, she places the products or articles—little piles of grains or cooking pots, handiwork, etc.—on the ground on a blanket woven by herself. For a Sunday market, she divides her goods into sections according to the categories of products for sale. Often a woman may sell articles of different types, e. g., potatoes or chuñu, veal, onions, and roasted beans. Some, however, specialize in single wares, such as pottery vessels or baize, a coarse fabric.

An inventory of the aboriginal products that are commonly offered for sale in the markets in the Peruvian Sierra, includes: Maize which is tender (chojllo), dried in various degrees, cooked and preserved (chochoka), simply cooked (muti), cooked and cracked (sarapata), or roasted (kamcha or hamka); many varieties of potatoes which are fresh or dehydrated (chuñu or moraya) and have great nutritive value; quinoa of various kinds; ocas and preserved ocas (kawi); ulluco; mashua (añu); a sweet variety of white potatoes; sweet potatoes (apichu); manioc or yuca (rumu); arracacha or rakacha; tarwi; frozen but undried potatoes (kachochuñu); ají or peppers (uchu); various species of rokoto; calabashes; "kochayuyu"; "jatako"; "zapallos"; "llullucha"; preserved meat (charki); salted meat (chalona); "achojcha"; "purutu"; peanuts (inchis); "awaymantu" or "capuli"; "lucma" or "ruku-uma"; "tuna"; "tumbo"; "achira"; "koncha", or "zetas"; "wiñapu", or maize prepared for manufacturing chicha; "chuchos"; small dried fish (chiñi); frogs (kaira); edible herbs (yuyus); "paku"; little lumps of kañiwa (kispiñu); various flours; the ash of the quinoa stem (llipta); coca; "pakay"; papaws; "sawintu"; pepper; plums; etc. From among those introduced by the Spaniards, the Indians have adopted the following, which are now the object of commerce: Wheat, cooked and cracked (trigop'ata); beans, raw and roasted; barley; veal; pork; hens; eggs; garlic; onions; chickpeas; wheat bread; apples; peaches, etc. Merchandise includes a special line of pottery, baize or coarse cloth, straw mats, hampers or rush baskets, decorated gourds (*Lagenarias*), a variety of cord, braid and tanned skins, woolen and straw hats, cheeses of various kinds, various textiles including woolen fabrics, wooden spoons, halters and other equipment, crude footwear, etc.

The "Janpi Katu", or medicine booths, are integral parts of the ordinary fairs and markets, but, in addition, are established in independent stands outside of the market place. A special chapter would be needed to enumerate the multitude of medicines, which include herbs, minerals, parts of the bodies of animals or fetuses, coca, sea shells (mullu), colored earths, etc.

Since it is no longer possible to obtain gold and silver offerings, which were used in the ancient rites, the Indian now uses a little sheet or lump of any metal. They buy a large number of magic little figures of men and animals made of lead and of "berenguela" stone, principally the celebrated "illas," and use them as offerings for the development and multiplication of livestock. These are scenographic sculptures, on which appears a bull, sheep, llama, or alpaca, enclosed in its pen. These illas have come to replace the old *Inca* conopas.

Food and drink are particularly essential sections in the fairs, and entice the Indian to break with his habitual frugality. Ordinarily, he may obtain "chupi" (potato soup, vegetables, and chili), "uchu" (a dry soup of the same culinary ingredients), "rojro" (locro), "sanku" (sango), etc. The maize chicha is universal throughout the Sierra of Perú and is both a food and a drink.

There are also special seasonal foods. For the harvest and the fiesta of Corpus, the old "Inti Raymi" or "Pascua del Sol," which is celebrated in May or June (because it is movable), there is a cold food called "sercha mastacuy." This is a mixture of Indian and foreign dishes, tender maize, stew, rice, tortilla, pork, and chickpeas being mixed with "tarwi" and the tender flesh of roasted rabbit. During this season there is also an abundance of the fruit called achira, a sweet and very appetizing root that is eaten raw or cooked. The most harmful introduction of the European Conquest was cane brandy, which intoxicates the Indian crowds at their fiestas and fairs. Scores of Indians, especially throughout the altiplano, are victims of alcohol poisoning and die every year. It is well that the high price of this product today causes it to be adulterated with water, which makes it a little less harmful. The Indian makes very little money, and at fairs and markets few indeed accumulate a capital of over 50 soles (about $10). The fact is that money does not yet enter into their economic system in the same manner as among the rest of the population. Evidently the Indians never had a monetary system, although they had certain products which served as money, such as salt, sea shells, copper axes, chili, coca, etc., which were at the same time offered for sale.

SOCIAL AND ECONOMICO-POLITICAL EVOLUTION OF THE COMMUNITIES OF CENTRAL PERÚ

By Hildebrando Castro Pozo

THE AYLLU UNDER THE INCA EMPIRE

When the Spaniards conquered ancient Perú, which was then called Tahuantinsuyo, the *Inca* Empire extended from the southern part of present-day Colombia to the Maule River in Chile and from the Pacific Ocean to the Amazon Basin and the Mendoza region. Under the Empire, property rights in land were vested in the *Inca* Emperor, the Sun God, the curacas (the local caciques or chiefs), and the ayllus. Each of these enjoyed possession of enough land to satisfy its needs, with no limitation except that imposed by the boundaries and the allotment of each family, established by custom and sanctioned by the economico-political practices of the Empire.

The struggle between local groups, or ayllus, to acquire land had disappeared with the establishment of the *Inca* regime. The parcels of land belonging to ayllus were of a fixed size; only the lands belonging to the Emperor, the Sun, and the curacas changed in dimension through the conquest of new towns or through the political arrangements of the *Inca* Emperors. Newly acquired lands were divided between the Emperor and the Sun, leaving the necessary amount to the conquered tribes. In return for services rendered, the Emperor ceded lands to the chiefs, curacas, or princes.

On the Coast, i.e., the zone between the Pacific Ocean and the skirts of the Andes, each aggregate of interrelated family groups which constituted an ayllu was established near the river, on a small hill or strategic knoll which dominated the valley. The aboriginal ayllus were organized in small villages (aldeas), each composed of one-room, straw-roofed houses of stone or of clay and wood. These houses were round or square, 2 to 3 m. (about 6 to 10 feet) high and 5 to 6 m. (16 to 20 feet) in diameter inside, and lacked windows. The villages had no regularly planned streets, but the habitations seem to have clustered around a small plaza, in which there was a large edifice (now in ruins), which was possibly the Sun temple or the curaca's residence.

In the Sierra or Highland area, the ayllus were less regularly distributed and were spaced closer together. They were situated along the rivers, watersheds, and lakes, and on the often inaccessible heights and ridges of the mountains. From the fortified place in the lands which belonged to them, they kept constant guard. The Highland dwelling differed little from that of the Coast in capacity, comfort, and architectural forms, except that it was always built of stone or clay, and the doorways were so low and narrow that sometimes they could be entered only on all fours.

These villages were scattered along the Coast, Sierra, and Montaña throughout all the Tahuantinsuyo territory. In them developed the organization of the social nucleus, the ayllu. The ayllu consisted of several monogamous families who were descended from a common line and who continued to practice endogamy as an ancestral law. Some large towns, such as Cuzco, Cajamarca, and others, had been formed by the amalgamation of several ayllus of the same stock; in these cases, the city itself acquired the outlines of the communal family and marriages took place indiscriminately between members of the same or of different ayllus. When a town had two ayllus, they were called "Hanansaya" and "Hurinsaya" during the *Inca* Period[1] and "barrios" in the Colonial Period. Through this relative endogamy, the sociological bases of nationality in the old Empire were formed.

Marriage was a public institution in which the woman was given by her parents to those of the intended spouse, in return for the payment of a symbolic price. Under the *Inca* regime, the union was authorized and solemnized by the civil authority of the ayllu, in the name of the Emperor. Only one wife was legally permitted, and adultery was severely punished.

Children took their residence from their parents, i.e., they belonged to the community in which their parents had fixed their own residence. This fact was important in determining who would in the future render service to the ayllu. Usually, the woman went to live in her husband's ayllu.

An individual had the right to acquire and dispose of only personal possessions, such as clothing, tools, arms, and art objects, which were used daily. At the death of the owner, these objects were inherited by his children, if they were not buried with the body. The household furniture, the house, possibly some animals, such as guinea pigs and fowls, and the annual food supply formed the family's patrimony and were inalienable.

The communal village in Tahuantinsuyo consisted of a group of peasants who cultivated their lands, and, in some cases, cared for and pastured their flocks. Large groups of people were rare, and so were communities in which men earned their living in occupations other than those already named. Nevertheless, industries had already been separated from handicrafts in the home, and the workshop was in the process of organization. For example, the cloth for garments was woven on rudimentary looms, and the secondary operations of the textile art were carried on in workshops. This specialization in manufacture together with abundant raw materials led to division of labor between the villages. Some ayllus devoted themselves to metallurgy in gold and silver, some to ceramics, others to herding or to fishing, and still others to making artifacts for domestic use. There was no money, and needs were satisfied through barter or exchange. It seems that trading was left to the individual, without the intervention of the local authorities, and that in the populous centers it became customary to carry on exchanges in a fixed place, which was the origin of the markets and fairs.[2] Trade required several adjuncts: a standard of value, such as salt, red pepper, or coca; instruments, such as the huarcu, or scales; standard measurements of weight, volume, and size, such as the achupalla or unit of weight, the kullutupo (the Spanish celemín, a dry measure of about a peck), the kapa or extended hand, and the ricra, or fathom (braza).

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[1] See Rowe, pp. 255-256, this volume, for further discussion of these "sections" or, as they are sometimes called, "moities."

Each ayllu, or group of ayllus, either civil or natural, formed a governmental unit (curacazgo), ruled by a curaca. This institution seems to have been a local phenomenon, which developed in the course of the political evolution of the ayllu. The curaca, aided by a council of family heads or old men, settled all local, civil, political, and administrative matters, such as the division of water or crimes within the group. He ruled according to the established custom, and the council enforced his decrees. Crimes against religion, the State, and the *Inca* Emperor, on the other hand, were considered matters of state concern. They were judged directly by the Emperor's representatives and were punished with death.

The custom by which the curaca used to consult the elders or his friends regarding the distribution of ayllu lands was probably extended so that he conferred with all the members of the ayllu. Thus there originated the communal assembly, with limited powers. This supposition is based on the study of the public records concerning the establishment of chaplaincies by the curacas in Colonial times. The records show that the curacas always consulted their relatives concerning these chaplaincies, which were established only when there was no opposition by the relatives.

The patrimony of the ayllus was the marca, an area of farm or pasture lands surrounding the village. The rivers, streams, and lagoons, the pastures and natural forests, the herds, the wild animals, the gold, silver, and copper mines, and the aqueducts, bridges, and roads were integral and inalienable parts of that public patrimony.

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[2] See Valcárcel, this volume, pp. 477–482.

To cultivate the land and to construct and repair the irrigation works and roads, individual labor was required as a public service after the establishment of the ayllu. Each man had to work by mitas, i. e., in turns, in agriculture and in other public services. The workers were organized according to the quarters of the little villages, the men of each quarter constituting a group called chunca. The chuncas not only took turns but each had the responsibility for a certain proportion of the total labor which was assigned to it.

It is also possible that the ayllu system brought about the division of lands into small family tracts and the custom whereby all members of the ayllu collectively performed the farm labor on each tract—a form of cooperation in mutual services which excluded any kind of remuneration.

During the Empire, these obligatory services within each ayllu came to be thoroughly regulated by the State Government. For this purpose, the families and towns were registered and divided by regions in groups of 10, 100, and 1,000, and for each unit a chief was named whose duties were to oversee the fulfillment of the services. Idleness and laziness were punished as crimes, in accordance with public opinion. The mita, or obligation to perform public work, was rigorously imposed in the case of all services to the Empire, which thus came to have enormous contingents of men at its disposal. This state labor was devoted to the construction and improvement of aqueducts, bridges, roads, temples, palaces, and fortresses, to the care of the flocks, to work in the fields, and to fighting in the conquests, in accordance with the imperialist policies of the *Inca*.

As the men devoted all their time to these services, the *Inca* State provided them with shelter and food. Those who fought with the army in the field or who occupied recently conquered towns were provided food, clothing, and arms; those who gave their services on public works received a ration of food. According to Garcilaso de la Vega, those who worked the lands of the Sun, of the Emperor, and of widows and orphans, as well as those in the army, all were supported by the State. It was ordered that the customary work on the tasks pertaining to the ayllu itself be respected.

The storage of grains and tubers, and of fibers and hides for clothing, was organized. These goods were kept in public tambos or tambus, which were veritable regional storehouses, and were distributed to those who needed them. Wool and cotton were allotted to women, children, and old men, who had the task of spinning and weaving.

The *Inca* State did not provide any other necessities for its subjects, but for its own political convenience it contributed to the cult and to the popular religious festivals. After the time of Mayta Capac, education and instruction were granted only to the privileged classes.[3]

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[3] See Rowe, this volume, pp. 282, 293, for the religious and educational practices of the *Inca*.

The Sun and the Moon, during the time of the Empire, were the gods worshiped by the official cult; they were considered to be the sacred ancestors of the *Inca*. There existed other religious practices, such as those pertaining to the Wiracocha, Kon, and Pachacamac, who were considered as the beings who created the world, plants, animals, and men, but who behaved like the latter, and had more or less the demiurgic power of the monarchical divinities of Greek mythology; the worship of these was tolerated by the *Inca*.

THE AYLLU DURING THE COLONIAL PERIOD

In the Spanish Conquest of Tahuantinsuyo, two cultures faced each other, two diametrically opposed economic, political, religious, and social ways of life. These conflicting juridical systems could not coexist in the legal concept of the State which the conqueror held. The Spaniard's system was one of utilitarian individualism, and his ideal—not to mention his methods—was to monopolize and store up wealth and riches to be spent in the acquisition of power over the rest of the people and the realization of leisure for the pleasures of life. This economico-political pattern burst upon the social and juridical system of the *Inca* and destroyed its well-established and regulated system of values, even as it overthrew the Empire and deprived its men of all they possessed, forcing them to submit to the rudest exploitation.

When the Spaniards arrived in the New World, they organized the institution of repartimiento, which consisted of the appropriation and distribution of lands and Indians among the conquerors. This passion for acquiring wealth was so intense and the enonomic drives which this despoliation created were so strong that its restriction and repression by Christopher Columbus in Hispaniola caused the first disturbances and revolts among the Spaniards. For several reasons, the great discoverer of the New World lost respect and consideration. Even the Spanish Crown approved the "repartimientos" and paid no attention to Columbus' desire for justice.

The repartimientos in Perú constituted the first onslaught of the conquerors against the goods and people of the conquered Empire. The expropriation was complete. An expeditionary army which marched to conquer a town was not interested merely in land, for the Spaniards had no intention of dedicating themselves to its cultivation. The soldiers of the Conquest had not been farmers. They needed the men whose systems of labor had made the most valuable use of the lands, which were now to be converted into repartimientos. The rural properties belonging to the cult of the Sun and to the *Inca* Emperor, and the yanaconas (the men who, during the *Inca* regime, had worked primarily for the State or the Sun) who lived on them were the first object of the reparto or division.

A new system of law was on the march. Spoliation and violent appropriation were beginning, and, in order to justify them, there was later cited the principle that the lands of America, including those of the ayllus, had, by means of the Conquest, come to be the property of the Royal Crown of Spain, which consequently had to issue the property titles of individuals. The ordinances for the organization of the new towns and for the sale, composition, and repartimiento of lands, solares (house plots), and water, which were issued by the kings of Spain between June 18, 1513, and May 25, 1596, embodied the juridical norms of this new legal system. These, recognizing in principle the property right of the ancient Indian possessors, ordered that the lands be divided between the towns and their Spanish inhabitants.

In order that "[the Spanish inhabitants] may live in the comfort and convenience which we desire," wrote Ferdinand V, the houses, house plots, lands, caballerías (the amount of land given a caballero or gentleman), and peonías (the land given a foot soldier) were to be divided among them. A territory of 4 leagues around the plaza de armas was to be ceded to each city to constitute house lots for the town, town commons (ejido), pasture grounds, and public estates; of the remainder, one-fourth was to be an hacienda for the founder of the city, and the other three-quarters were to be divided into lots of equal size for the inhabitants of the town.

These laws clearly stated that a peonía included a house lot of 50 feet (15 m.) wide by 100 feet (30 m.) in length, with 100 fanegas (a fanega de tierra equals about 1.59 acres) of land for wheat or barley, 10 fanegas for maize, 2 huebras (the amount of land which can be plowed in 1 day with a team of oxen) of irrigated land, 8 huebras for plants and trees which grow without irrigation (de secada), and sufficient pasture lands for 10 hogs for breeding purposes, 20 cows, 5 mares, 5 sheep, and 20 goats. A caballería included a house lot 100 feet (30 m.) wide by 200 feet (60 m.) long, 500 fanegas for wheat or barley, 50 fanegas for corn, 10 huebras of irrigated land, 40 for dry-land plants and trees, and sufficient pasture land for 100 hogs for breeding purposes, 100 cows, 20 mares, 500 sheep, and 100 goats (Recopilacíon de Leyes . . . de las Indias, vol. 2, bk. 4, ch. 12, Law 9).

The *Inca* system of collective land ownership was doomed, and the way was open for all manner of abuses and extortions associated with the system of reductions and encomiendas.

This system of laws ordered that the Indians be allowed to keep their lands, improved ground, and pastures, and that the remainder should be the property of the Crown. If any part of this Indian land was conceded or divided in an illegal manner, it was declared that the concession was null and void. If, however, the conquerors divided land among themselves or took it by violence from the Indians, the latter were granted the right of restitution only "if the land belonged to them de jure," that is, if they could show, according to the Spanish law instituted by the Conquest, that they owned their property with just title or with immemorial uninterrupted possession. This requirement was impossible for the Indians to satisfy, and inevitably signified the loss of their lands.

The practice of this juridical system eliminated all the collectively owned property of the Indians in the Coastal zones and valleys where the Spanish cities were founded, and eliminated a large part of it in the Sierra, wherever the conqueror set his foot and created new towns or took possession of the existing ones. In the Coastal zone, this caused the disappearance of the consanguineous community—the aboriginal group or ayllu consisting of an extended, endogamous family living on lands which it owned communally. Where new communities were organized during Colonial times, it was done on lands ceded by the kings of Spain to the curacas as composition (composición). These communities were organized by the descendants of the curacas, following the practices of the ayllu. They in no way represented the transplantation or influence of the Spanish comunidad, as some Spanish sociologists and historians have believed.

We have said that the Indians were scattered in small villages which, on the Coast, were located on the slopes and natural knolls or on small artificial elevations which they themselves constructed, for protection from floods and to guard their properties, and, in the Sierra, were situated on hilltops, which were often inaccessible but easily defended. The conquerors, masters of the country, considered the natives as objects to be appropriated or instruments with which to achieve their economic ends. They therefore wanted the Indians in accessible locations near their farms and mines, so that they could have no pretext for resistance. Thus, under the guise of aiding, instructing, and indoctrinating them "in order that they shall not live scattered in the lands and forests, deprived of all spiritual benefit and of living in good order (policía)," their reduction (reducción) was ordered. This consisted of compelling them to abandon villages, which were located on their original marcas (communal lands), to move to open, flat places, which the conquerors chose. The new towns established on these locations included the inhabitants of two, three, or more ayllus which were thus reduced to only one community.

Each of the groups reduced in this manner had originally been an ayllu and had owned all the lands of its marca. The reductions were confronted with difficulties arising from four facts: (*a*) That in some marcas, all the lands had been pastures and the ayllu members had engaged solely in herding; (*b*) that the land of other marcas had been partly pasture for herding and partly agricultural land for farming without irrigation; (*c*) that the land of certain marcas had been entirely for farming with artificial irrigation, either continuously or seasonally; (*d*) that often the Indians were reduced in new towns at a great distance from their original marca lands.

Taking into consideration that the Indians had been more or less adapted to the irregular topography of the Andes and that the reductions were made without regard to native land use, one will immediately perceive the mass of inconveniences and abuses caused by bringing together these arbitrary conglomerations of individuals, who differed so in their modes of labor, who left their flocks untended, and who abandoned their crops and irrigation works. Fortunately, the curacas allowed each of these dissimilar groups of people to live together in barrios, or quarters, within the new towns.

Native agriculture suffered the worst break-down under this system, as the major part of the population was taken to the workshops and mines. The irrigation systems deteriorated and disappeared, and great tracts of land reverted to forest or became sterile. Because of erosion and negligence, both the land and the terraces have been lost for hundreds of years. Where the ayllus were farthest from their marcas and the ayllu members could not for one reason or another maintain contact with their lands, they lost them to the conquerors, who immediately laid claim to them or acquired them by force or by composition (composición) from the Crown of Spain. This phenomenon together with the mita (obligation to perform community labor) and yanaconas (full-time workers for the State), which also accompanied the process of reduction, gave rise to the extreme poverty of certain Indian families within the community, although all members theoretically were owners and users of the lands of the marca.

An interesting example of this type of community, of which there are many in the Republic, is Santísima Trinidad de Huañec, at present the capital of the District of Huañec, Province of Yauyos, Department of Lima, among the spurs of the Western Cordillera of the Andes at more than 3,280 m. (about 10,800 ft.) above sea level. Two ayllus, Huañec and Allauca, were grouped together in the town by the reduction. To distinguish this town from another with the same name, it is called Allauca de Huañec. The families of the two ayllus are separated only by a street which forms an integral part of the town itself. The town divisions are like two quarters, in each of which the respective ayllu carries on autonomously all of its economic, political, and social activities. Each has its lands, on which the members work for the community, according to the system of faena, or faina. Each also has its assembly, its public place in which this functions, its churches, bridges, roads, and irrigation ditches, its local schools in which it takes pride, its traditions and customs, separate titles to its properties, and communal regulations to which it submits in the name of the authority of its ancestral precepts.

The Government of the Republic, recognizing the existence of these two ayllus, even though they form only one town which is the capital of the district, has ordered that they be registered separately.

Huañec has 368 inhabitants, and Allauca has only 250. The town in general has a public primary school, a municipal council which functions in local matters, a Government building, a plaza de armas, a bulring, and a place for sports. Both ayllus, by agreement of their authorl ities, have disposed of their lands as follows: The pasture lands are used in common by the herds of all of the inhabitants of each ayllu, and the cultivated lands have been parceled out in pieces, one to each and every head of a family. The division was made in 1888, and another in 1908 for those who had not obtained land in the first.

The men of these ayllus have adapted their life to the climatic and telluric factors of the Andes. Some cultivate the sheltered lands or yungas, on the low plains or in the valley bottoms along small streams. Their crops vary with the climate and altitude, maize and bananas being grown in the valleys and barley and potatoes near the puna or cold plateau lands of the high Andes. Others have settled in ranches on the plateau, and raise llamas and alpacas for their wool, living on the proceeds of this occupation.

Both communities jealously conserve their social practices, including the faina, or obligatory collective labor performed by all the heads of families, on the public works of the community, and the minga, mutual help in private work and in marriages. There are also dances and fiestas, the most gala events in the community. The ceremonies and religious practices take place at the fiestas for the patron saint or at the beginning and end of the harvests. There is a sacrificial cult, in which the Indians lay food on the tombs of the dead on the Day of Souls (Día de Difuntos), and give honey and cakes of flour to persons who resemble the dead on the condition that these persons offer up a prayer or credo for the soul of the dead. Finally, at the fiesta of the Santísima Trinidad, they perform the popular drama depicting the death of Atahuallpa, in which nearly everyone takes part, and, dance the curious dance of the Negroes and that of "Pallas."

The socio-economic problems of these communities during the Colonial Period were numerous, for, by the reduction, they not only lost a large part of their lands, houses, roads, and irrigation works and terraces, and had to abandon the cultivation of some plants, but they were forced to render free services to the Spanish conquerors. As the reduction was essentially inspired by utilitarian motives and was altogether in favor of the Spaniards, the latter located the Indians at—i. e., "reduced" them to—their mines and farms, where they forced them to render free services. The Crown of Spain said "that it is just and reasonable that the Indians who have been pacified and reduced to obedience and vassalage should pay tribute in recognition of our dominion and contribute service such as subjects and vassals owe, for they have also among themselves the custom of paying tribute to their tecles and leaders. It is ordered that the Indians be persuaded for this reason to agree to some tribute of a moderate quantity of the fruits of the soil, to be paid at the time and in in the manner set forth in the laws of this section." The laws, continuing, ordered that these tributes be collected by the conquerors, to whom, legally, the reduced Indians had been granted in encomienda, in order that they might "comply with the duties with which they were charged." (See ch. 3, bk. 6; Law 1, ch. 5, bk. 6, Recopilación de Leyes . . . de las Indias.) Because of this tribute, the "reduced" Indians remained in veritable slavery or economic and moral servitude, which resulted from the repartimiento or division of men among the conquerors, which, after all, is what the encomiendas were.

Chapter 8, book 6, volume 2, of the Recopilación de Leyes . . . de las Indias is totally concerned with the regulation of this problem. It reveals that the kings of Spain authorized the governors, adelantados, and pacifiers as soon as the pacification should be finished, to "divide the Indians among the neighboring [Spanish] inhabitants, entrusting the natives to them in order that each [Spaniard] should have charge of those who had been on his repartimiento, and should defend, indoctrinate, and shelter them, teaching them how to live in good order, and doing whatever else encomenderos were obliged to do" on their respective repartimientos.

In spite of the fact that the indoctrination of the Indians was the pretext for the repartimiento and encomienda, the Indians were considered as exploitable material sui-generis. They were granted to the discoverers, pacifiers, and founders of towns for the length of two lives; that is, the owner could will them to his children or his widow, or, lacking both, his brother. As each Indian was supposed to pay tribute in money or fruits of the soil from the age of 18 to 50, and the tribute was to be collected by the encomendero, the latter could profit from his encomienda in two ways. In the first place, he collected tribute from each of his encomendados(the Indians of his encomienda) in the amount and quality which had been settled upon, and in the second place, he received personal services from them and appropriated their lands, as is revealed by Law 29 of the book and chapter previously cited. This law orders the viceroys and governors "not to give out in encomienda the property of Indians whom they eject [from their lands] without allotting some part of the income and use to the encomendero, because if all is expended in annuities (en pensiones) the encomenderos will seek to derive more use from the Indians than is proper and permitted."

The institution of encomiendas was of such consuming interest, and its consequences were so important in the economic, political, and social life of the Colonial Period, that it was amply implemented in a multitude of legal ways, commenting upon and prohibiting the abuses and arbitrary measures imposed, such as the sale, gift, transference, pignoration, division, and other illegalities committed against the Indians of the encomiendas, all of which gives us a detailed exposition of the mass of spoliations to which the encomienda gave rise.

The encomienda became vacant at the death of the encomendero; if he lacked legal heirs it became the property of the Royal Crown. As the latter continued, however, to cede the encomiendas or to create pensions or incomes which were to be covered by the value of the quantity of tribute paid by the Indians and granted to the near relatives of the late owner or to needy descendants of discoverers and other persons, the institution disappeared only when independence was proclaimed, although the system of tribute continued in force long after that.

The reductions and encomiendas were the methodical and systematic attack by the conquerors on the territorial property of the ayllus which escaped the first spoliation of the division or reparto. The lands which had belonged to the Indians who were entrusted to (encomendados) or divided among (repartidos) the Spaniards, gradually came to form part of the latter, despite all the laws which prohibited it, for the Indians did not know how to read them, or even if they had understood them and were brave enough to ask that they be obeyed, they would have been sent away in good custody, if the matter were not settled by more rapid and violent means.

In order to protect and consolidate the property acquired by means of the spoliation, exactions, and violence which the Conquest engendered, the spirit of the conqueror inspired the "legal" formula of composition (composición), by means of which one could not only "compose" any original vice involved in the acquisition of property, but which the Crown also utilized to sell their own lands back to the ayllus.

The lands were not only divided and their grant or violent seizure confirmed by persons with authority to do so, but they were also granted, in the form of many ranches, farms, peonías, and caballerías, by persons, such as certain cabildos or local dictators, who did not have the right. In some cases the expropriations were even effected surreptitiously in forbidden ways, without respecting the properties of the ayllus and curacas who, on the Coast, lost nearly all their lands. To exculpate these deeds and strengthen the titles by which the properties were held, a series of laws, called the laws of "composition," were promulgated. They legalized the spoliations and permitted the aggrieved ayllus or curacas to buy their land back from the Crown if it had not been in the possession of those who had seized it for more than 10 years. Thus the Crown was substituted for the individual who had seized the land and received the price of the seized land, although it had never owned it and had even ordered that its boundaries be respected.

Thus the titles to land were torn away from a multitude of small landowners.

After the Conquest, the territorial rights in the country remained in the hands of encomenderos, repartimenteros, towns and their founders, settlers, buyers or those who had received their land through the mechanism of the "composición," churches, saints, abbeys, ayllus, and curacas. All these lands were worked by the mitayo Indian, who was enslaved in the reductions, encomiendas, workshops, and repartimientos and served as a valuable help to the oxen and horses in plowing and working the despoiled land.

The system of labor to which the native was forced to submit in Colonial times was completely different from that under which he had worked in the *Inca* regime. As a mitayo he was forced to work in the mines, workshops, caballerías, farms, repartimientos, and peonías; he was utilized as a servant and beast of burden; in short, he was used in all the tasks of industry, commerce, and transport, but without any remuneration whatever but his food, which consisted of a few potatoes or a little maize and some coca leaves.

The native had been accustomed to obligatory work without pecuniary remuneration under the *Inca* regime, but, at the same time, he was provided with all his necessities. In this way, the population of the Empire attained full self-development, fulfilling its ends, and constituting the most important cultural center of South America. The conqueror, however, provided only the minimum of food necessary for his servants, and, ignoring their other needs, not only placed the Indian population in economic slavery but also put into effect a new and successful method for destroying it. Despite the order that the Indians be paid a wage, they did not know enough to take advantage of this, partly because they did not know the value of money, partly because their "employers" paid them in three ways: late, badly, or not at all, as the Spanish refrain runs. In paying wages for their work, the master first deducted the tribute due the King, the mayor, the inspectors, the judge who was in charge of the collection, the other officers, and the hospital. (See Law 14, ch. 15, bk. 6, Recopilación de Leyes . . . de las Indias.) These deductions always left the Indians in debt, depriving them of the only resource which they could obtain by means of their labor. Nonetheless, they were supposed to satisfy all their personal and family needs with their wages.

The justification of this system was that the Indian was given no opportunity to develop new needs. His needs were reduced and curtailed until he was converted into a nearly irrational being, with a standard of living lower than that of work animals and only little higher than that of the llama, the beast of burden. This, together with his hereditary frugality and the rustic simplicity of his herding and farming methods, accustomed him to a vegetative existence, without any element of volition in the monochrome of slothfulness and imbecility. From this psychology he still suffers in some sections of our country; it is the worst inheritance which the Republic has received from the Spanish Colonial regime.

Among the direct effects of this heritage were that the Indian was not taught how to read, to cultivate his spirit, to be clean, to dress himself and wear shoes, that with his family, he was housed in peons' quarters to sleep and rest from the fatigue of the day's work, that his religious manifestations were inquisitively scrutinized, repressed, and punished, that his temples and his gods were destroyed, so that in the course of several centuries, he arrived at the stage of not being able to dispose of, or even to think about, his own person. Because of these he sank to such a level that his spirit acquired a numbness and unresponsiveness in the presence of the "misti," or landowning employer, that has been erroneously judged as a cunning hypocrisy.

This condition led to decay of agricultural methods and gave rise to the division of the marca, which had belonged to the ayllu, into individual family plots. The process was one of social disorganization following catastrophe. All that remained was the desire for personal preservation, which, in this case, was economically, historically, and sociologically the striving to defend the family.

Included in the family were the children and the wife, whose role in this period merits discussion.

The women and the boys under 18 did not owe tribute, according to the Leyes de Indias, even though they worked as shepherds and as apprentices in certain tasks, earning 2½ reales a week, or "5 pesos a year, paid in current money, and furthermore the food and clothing for the use of the Indians." They also were the ones who cultivated small parts of the marca lands to feed their families and to pay the tribute "in fruits of the land," referred to in the law of tribute.

The women and the minors, then, to some extent maintained the family economy, and helped to sustain the males, who paid tribute to the measure of their productive capacity. But, as the harvests were not always sufficient to cover these obligations and necessities, there arose the unavoidable necessity of hiring out ("concertar") the children so that their "5 pesos a year," in case they were paid, helped pay the tribute and meet other family needs. In the Sierra, the ayllus and their marcas, which had been able to save themselves during the first period of the Conquest because their geographical and climatological situation was unsuitable for the life and manners of the conquerors, were defended tenaciously by the Indian women. They continued to exist within the regime of slavery, because the largest consumers, the Indian masses, had largely lost their productive capacity and their power to consume had diminished considerably. If to this is added the fact that the restrictions imposed on outside commerce and on the cultivation of certain crops made greater production or more extensive farming useless, we have the explanation of why the landowner had more than sufficient lands, Indians, and slaves for a production designed to satisfy, in free competition, the necessities of its few consumers. The marginal lands, he did not need, and, it was convenient to leave them in the possession of the Indians, for he could thus continue to pay them a low wage with impunity, and they could supply the deficiency by family labor in the plot in the marca of the ayllu.

THE AYLLU UNDER THE REPUBLIC AND TODAY

The processes causing both the disintegration of the community and the establishment of individual property ownership did not end in Colonial times. In some exceptional Coastal valleys, the exploitation of the farms acquired characteristics of true capitalistic industrialization: there was a patrón, or landowner, with Indian mitayos, peons and slaves, who performed services for him and were paid in money, food, or clothing. Consequently, when the Republic was established on the basis of the Colonial economic systems, there was not one man in the War for Independence who stood for the ideal of restoring the conquered race, or at least for its economic and intellectual betterment and elevation to the socio-political level of the other social classes. The Indians, therefore, continued to be imprisoned in the economic, political, and social norms of the Colonial epoch; for them independence and republican institutions had no significance whatsoever, for their masters were the same and had even acquired greater authority.

At the same time, the Indian's intellectual condition and state of servitude prevented him from recognizing the transcendental importance of the emancipation movement, which remained foreign to him. Many Indians volunteered as recruits to whichever of the contending armies would enroll them in their ranks, an act which gained no sympathy at all for them.

Thus the Republic, during the first 100 years of its organization and existence in freedom, left the Indian on the same plane and in the same condition as during Colonial times. On the Coast, he was "reduced" on the large estates and lived in small towns or settlements, where he was kept under control in order that he might perform the mita in mines, fields, or workshops, that he might pay tribute in money or in kind, and, at the present time, that he may work as a peon, farmworker, or yanacona on the large farm. In the Sierra, he also lives "reduced" on the large farm, where his services in agriculture or in herding are repaid by conceding him the use of small plots of land in order that he may feed himself and support the luxury of a numerous family. In the comunidad, he lives in greater socio-economic independence, fighting to defend his land from the aggression of the large landowners and to recover lost lands, trusting in the mirage of constitutional legislation which has sheltered him since 1919.

Nevertheless, in spite of the fact that the Indian comuneros in the central region of the country have notably bettered their socio-economic condition during the last 30 years, thanks to their organization and to the impulse which has been given to their institutions and instruction, the condition of the comunero as well as that of the "reduced" laborer, or yanacona, in the small villages on the large farm merits serious consideration. The communities deserve this consideration because they constitute an economic institution capable of being transformed into a powerful cooperative system of production and consumption in agriculture and herding with its own credit system. For this they have great wealth in lands, herds, and tools, as well as the custom of working together at the same task and cooperating in service for the collective good. Their public works, roads, local and communal schools, bridges, irrigation ditches, and dams are constructed by this system of work, with no remuneration except food and drink. Such social labor constitutes an obligatory communal bond. This bond not only unites the will of all in the same task, but symbolizes compliance with and performance of the obligation which each owes to the community as a member of the ayllu and a user of the parcel of land which he cultivates. The use of this land is his by right, deriving from the division of arable lands made according to immemorial custom. This division is respected by the community, and has given rise in post-Contact times to full individual title to each parcel. In many communities, it has expedited the monopolization of land in a few hands and the absolute disappearance of the community, but in the majority of cases it has created a reactionary sentiment which has resulted in prohibition of the sale of lands to individuals outside the community and a prohibition against parents disposing of land without the consent of their children. Children who feel that they have been deprived of their rights seek to vindicate them, even when a legal sale has been made in conformity with the laws of the Republic.

The comunidad, then, is a true national institution, and the country, has thousands of them. Because of their kinship (gentilícea) origin and the Indians' earthy soul, which loves, the land as if it were his mother, many farms belonging to the families of curacas or other individuals are still worked in common. The users of these are at present very numerous, and in view of the constitutional guarantee of the right to dispose of their lands and communities, they have organized themselves and asked that the government officially recognize and register them. The comunidad is an economic factor which will not disappear. It awaits only a strong and intelligent will and hand which will direct it along an economico-political path for the national good.

Nevertheless, this is not all of the problem of our aborigines. On all the large farms in the Sierra, in much of the zone between the flat plain and the sea, and in the highest ridges of the western Andean Cordillera, the aborigines and "yanaconas," who were earlier "reduced" to their present villages, now serve as farm workers (colonos), yanaconas, shepherds, and servants, within the same Colonial system to which we have referred. The farm workers (colonos) of the Sierra are considered as an integral element of the fundo (large farm), which, without them, would be worthless. This is because each farm worker has a parcel of the fundo, for which he pays in annual labor. To these services there is almost always added a fee of money for the pasturage of animals, which he therefore gives or sells to the owner to meet the price imposed for their grazing. In this way, all the farm work is performed with the labor which the colonos render without pay. Furthermore, it produces income in cash and animals, all of which would disappear if the colonaje—the system of using colonos as farm workers—ceased to exist.

At present, when a farm is to be bought, the buyer asks how many workers it has on it. On the basis of the number of men, the number of workdays which each owes, what they are able to produce annually, and the amount of livestock which they possess, he determines the price which he will offer.

The problem of yanaconas on the Coast is as great as the preceding one, for it is manifest on all the cotton, rice, and flax farms. The owner requires the yanacona to sow a specific crop on 90 to 95 percent of the land allotted to him, to pay the owner a determined proportion of the harvest per fanega (1.59 acres), and to sell him the rest. He advances the worker his maintenance and supplies him with the necessary implements, which shall be deducted from the value of the proceeds of the harvest. Nearly all the rural properties (fundos) in the vicinity of Lima are cultivated by this system, one exception being a fundo cultivated by the owner personally. In the families of the farm workers, or yanaconas, the children and young people are servants (pongos) in the houses of the owners for periods of a week or fortnight at a time, and receive only their food or occasionally a few reales. They also herd the flocks on the farm for the same remuneration.

This depressing socio-economic condition of the farm workers, a large part of whom live on the farms and whom the State has not been able to protect, results in the enormous figure of 76.39 percent of illiterates in the school-age population in the Sierra, and 71.39 percent in the total population, according to the census of 1940. The problem is even more startling when one considers that the whole indigenous population of the country amounts to 2,847,169 persons, distributed densely in the Departments of Piura, Ancash, Lima, Huánuco, Junín, Huancavelica, Ayacucho, Apurímac, Cuzco, and Puno, that is, along the whole mountainous spinal column of Perú. This indigenous population is grouped in the towns of the rural comunidades and in the small villages and hamlets of the farms, carrying on the labor of farm workers (colonos), yanaconas, herders, peons, and pongos or house servants. It is paid between 30 and 80 centavos of a Peruvian gold sol (about 6 to 16 cents, U. S.) for a day's work of 8 to 10 hours.

The total population of Perú is a little over 7,000,000, which includes about 3,000,000 Mestizos who also live in the country as peons and farm workers, and many of whom display the same dejected spirit as the Indians.

Perú, then, is a country consisting predominantly of Mestizos and Indians who, when they have solved their immediate problems, must construct their culture of the future with due attention to their historic past.

THE AYMARA

By Harry Tschopik, Jr.

INTRODUCTION

In recent literature, the *Aymara* have been variously described as "dull," "stolid," and "unimaginative." While these adjectives have been popularly and carelessly applied to describe the individual *Aymara* "temperament," they do, in the opinion of the writer, add up to give a general picture of the way in which *Aymara* culture today strikes the outsider. More precisely this picture applies to the *Aymara* of the towns, fincas, and haciendas rather than to the independent Indians of the ayllus.

Perhaps the drabness and monotony of *Aymara* culture may be explained in part in terms of its physical environment as well as its long history of exploitation at the hands of the Whites. The *Aymara* live in an inhospitable physical environment in which the struggle for survival is an ever-present reality; their chief preoccupation is with food and protection against the elements. Basically an agricultural people, they must contend with poor soil and a limited choice of crops in a region where a harsh climate makes farming precarious. To the *Aymara* the land, the crops, and the flocks comprise all-absorbing interests. These time-consuming economic activities make for a rigorous and monotonous daily routine, with the result that *Aymara* culture impresses the outsider as being extremely "utilitarian." Recreational activities are few and infrequent, and the material aspects of the culture have been emphasized at the expense of its esthetic and ceremonial manifestations. Although markets and trading expeditions have their entertainment value, emotional release from the daily routine finds its chief expression in orgiastic drinking bouts occasioned by weddings, funerals, and fiestas.

The basic preoccupation of the *Aymara* with the economic aspects of life colors the whole fabric of their culture. Owing in part, perhaps, to the uncertainty of existence on the altiplano, they seek omens in nearly all manifestations of nature and possess an elaborate series of techniques for divining the future; indeed the total culture of the *Aymara* might best be characterized as "apprehensive." The great bulk of *Aymara* magic is oriented toward controlling natural phenomena in order to assure economic security. Most public and private ceremonials are designed to produce general prosperity, better crops, larger flocks, or more fish. Economic gain underlies most cases of witchcraft, the chief medium through which aggression is expressed. The lazy man is condemned, the good provider extolled as a model of virtue. The wedding ceremonial emphasizes the separation of the bride from her people, while the funeral of an adult dramatizes the loss of a useful member of the extended family.

DISTRIBUTION AND HABITAT

The *Aymara* at the present time inhabit a large portion of the Titicaca Basin in the modern Republics of Perú and Bolivia (map 1, *No. 5*).[1] Although remnants of the *Uru* and the related *Chipaya* survive in isolated localities (see pp. 575–577) and, although the *Quechua* have made considerable inroads both in *Inca* times and afterward, this region is still the stronghold of the *Aymara*-speaking people.

The territory inhabited by the *Aymara* is sharply delimited in three directions by natural barriers. To the west lies the Maritime Cordillera, the Coast range of the Andes, while to the east extend the magnificent snow-capped peaks of the Cordillera Real with the jungle of the Amazon Basin beyond. Between these two mountain ranges lie the vast, windy Pampas of the altiplano at an altitude of upward from 12,500 feet (3,812.5 m.) above sea level. Here the rivers drain first into Lake Titicaca, then into Río Desaguadero, and, finally, into Lake Poopó, where their waters are eventually lost in the salt swamps of Uyuni. These swamps, which merge into the desert of northwestern Argentina, form the permanent southern boundary of the *Aymara*. Since to the west easy access to the Coast is afforded by a series of sloping Pampas and valleys, it is not surprising that population has shifted most in this direction.

The vegetation of the altiplano consists chiefly of coarse grass, which affords pasturage to large flocks of llamas and alpacas, trees being rare. The more sheltered valleys around the northern and southwestern shores of Lake Titicaca are more favorable to agriculture and are heavily populated. Mammalian fauna of the Titicaca Basin is meager and is composed mainly of rodents, foxes, a few deer, pumas, spotted cats, and two undomesticated species of the family of American camels, the vicuña and the guanaco. Bird life, on the other hand, is extremely abundant and varied.

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[1] Many of the data presented here which relate to the modern Indians are selected and condensed from the writer's unpublished field notes on the *Aymara* of Chucuito, a small community in the Department of Puno in southern Perú. This research was financed by grants from the Peabody Museum and from the Division of Anthropology of Harvard University. Since Chucuito is located in the area occupied at the time of the Spanish Conquest by the *Lupaca* subtribe, such phonemic recordings as appear in the following pages are to be understood as belonging to the *Lupaca* dialect of the *Aymara* language. These are given in small capital letters. Unless otherwise specified, the culture described in the following summary is that which prevailed during the last decade of the 19th century; in general, with minor modifications in dress and material culture, it applies to the present-day situation.

I wish to thank Dr. Weston La Barre, who kindly made available to me his unpublished manuscript which deals particularly with the ethnology of the Bolivian *Aymara*.

Unless diacritically marked, all consonants and vowels in phonetic transcriptions of native names have their Spanish values. In addition, *q* has the sound of a velar *k*; *x*, a back, roughly aspirated *h*; *k* and *h* are pronounced as in English; *p‘*, *t‘*, *k‘*, and *q‘*, are aspirated; *q’*, *p’*, *t’*, and *k’*, glottalized; *č* is equal to the Spanish *ch*; *č‘*, aspirated *ch*; *č’*, glottalized *ch*; and *ḽ*, Spanish *ll*.

The year has two seasons, a rainy season which lasts from October through April and corresponds to summer, and a dry season from May through September. During winter, the temperature frequently falls below freezing at night. Snowfall is slight, except in the high mountains, and is confined almost exclusively to the rainy season.

Cieza states that the Collao was the largest and most populous province in the Viceroyalty of Perú.[2] Before their conquest by the *Inca*, the *Aymara* were organized in a series of independent states which probably were also dialect groups. These former states or subtribes may be located geographically with some accuracy (see map 4):[3] *Canchi*, in the Vilcanota Valley, between Combapata and Tinta (Department of Cuzco, Perú); *Cana*, between Tinta and Ayaviri (Departments of Cuzco and Puno, Perú); *Colla*, on the plains of the Pucara and Ramis Rivers, as far as Puno (Department of Puno, Perú); *Lupaca*, on the southwest shore of Lake Titicaca, between Puno and Río Desaguadero (Department of Puno, Perú); *Collagua*, north of Arequipa, on the upper course of the Colca River (Department of Arequipa, Perú); *Ubina*, east of Arequipa, in the upper drainage of the Tambo River (Department of Moquegua, Perú); *Pacasa*, or *Pacaje*, south of Lake Titicaca, along both banks of the Río Desaguadero (Bolivia); *Caranga*, or *Caranca*, south of Río Desaguadero to Lake Coipasa (Bolivia); *Charca*, northeast of Lake Poopó, in the neighborhood of Chuquisaca (Bolivia); *Quillaca* or *Quillagua*, southeast of Lake Poopó (Bolivia); *Omasuyo*, east of Lake Titicaca (Bolivia); and *Collahuaya*, in the provinces of Muñecas and Caupolicán, Bolivia.

There is little doubt that in pre-*Inca* times, and probably until well into the Colonial Period, *Aymara* was more widely spoken than at present, but it is difficult to be certain of its former boundaries from the vague and scattered references to be gleaned from early Colonial documents. In some of the regions where *Aymara* was formerly spoken, it was almost certainly spoken as a second language, existing side by side with one or several local languages, which probably were independent and are long since extinct. Rivet, following brief mentions in the "Relaciones geográficas de Indias," holds that some *Aymara* was spoken anciently in the Provinces of Lipes and Chichas (southern Bolivia) and in Arica (northern Chile). These people may have been the *Aymara* mitimaes settled in this region during the reign of Tupac Yupanqui (Barriga, 1939, 2:85). Rivet also locates *Aymara*-speaking people in the southern portions of the Departments of Cuzco, Apurímac, and Ayacucho (Perú). *Kauki*, a language supposed to be related to *Aymara*, is still spoken by small islands of Indians in the Provinces of Yauyos, Canta, and Huarochirí (Department of Lima, Perú).

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[2] The name "Colla-suyu" was employed by the *Inca* to designate the southern province of their great empire; "Collao" is probably a Spanish corruption of the word "Colla." This latter term seems to have been used by the *Inca* first to designate the *Aymara* state of the same name which had its capital at Hatuncolla; later, by extension, the term came to be used for the *Aymara* in general. Cieza de León (1922, ch. 109), whose "Crónica" was written about 1550, uses the terms "Colla" and "Collao" indiscriminately. The *Aymara* probably referred to themselves as "human beings" (HAQE); they call their language "human speech" (HAQE ARU). The origin of the term *Aymara*, which today designates the language as well as the ethnic-cultural group, is obscure. Apparently, it was not employed during the early years of the Spanish Conquest, and first appears as a linguistic term in a relation of Polo de Ondegardo (1916 a, chs. 7–8) of 1559.

[3] Important sources consulted on the former distribution of the *Aymara*-speaking people include: Cieza de León, 1924, pt. 1, chs. 98–106, and 1880, pt. 2· Bertonio, 1879 a, Arte y Grammática, p. 10; Vocabulario, Preface; Rivet, 1924 b, *in* Meillet et Cohen, vol. 16, pp. 651–53; Markham, 1871; and Relaciones Geográficas de Indias, 1881–97. The map which illustrates the distribution of the various *Aymara* subtribes (map 4) is obviously but an approximation to the reality, since the data on which the map is based are not strictly contemporaneous.

Of the historic subtribes of the *Aymara*, the *Canchi*, *Cana*, *Colla*, *Collagua*, *Ubina*, and parts of the *Charca* and *Collahuaya* now speak *Quechua*. *Aymara* continues to be spoken in portions of the Departments of Arequipa, Moquegua, and Tacna, and in the Provinces of Puno and Chucuito (Department of Puno, Perú). According to La Barre, *Aymara* persists in Bolivia in the Department of La Paz in the Provinces of Omasuyos, Ingavi, Paracajes, Sicasica, Muñecas, Camacho, Larecaja, Los Andes, Murillo, Loaiza, the western portion of Sur Yungas, Inquisivi, and Caupolicán; and in the Department of Oruro in the Provinces of Paria, Carangas, and Charanta (La Barre, ms.).

Since the arrival of the Spaniards, there has been a general decrease in the number of *Aymara* owing to wars, revolutions, epidemics, and forced labor in the mines and coca plantations in Colonial times. Forbes estimated the *Aymara* population of Perú in 1850 as 379,884, and of Bolivia as 497,367, a total of 877,251, although he believed the correct figures to be nearer 750,000. This estimate is probably too generous. La Barre's estimate in 1935 of 600,000 for both countries seems reasonable (La Barre, ms.). The latter states that 70 percent of the Bolivian *Aymara* live at an altitude between 6,000 and14,000 feet (1,830 and 4,270 m.) above sea level, while approximately 80 percent live in a density area of 2.5 persons per square mile. Vázquez de Espinosa presents interesting population figures for the *Aymara* of Spanish provinces for about the year 1620 (Vázquez de Espinosa, 1942, pp. 705–20). Romero presents the oldest population figures available, which are taken from tribute lists for 1591 (Romero, 1928, p. 169), at which time, in the area formerly occupied by the *Canchi*, *Cana*, *Colla*, and *Lupaca* subtribes, there were some 35,000 tributary Indians, not including women and children or men over 50 years of age.

ARCHEOLOGY [4]

The earliest known archeological remains in what is now *Aymara* territory are those at the sites of Tiahuanaco at the southeastern end of Lake Titicaca and at Pucara northwest of the Lake. Recent work has disclosed other scattered ruins in Perú and Bolivia of the Tiahuanaco-Pucara culture (Kidder, 1943; Bennett, 1936). The connection of these early sites with the modern *Aymara* is a matter for speculation. Cieza and Father Cobo, in descriptions of Tiahuanaco, state that the Indians did not know who had built the site. When Cieza was in Pucara, he found it in ruins and inhabited by a few Indians under *Inca* rule. Means (1931, p. 136) states that good arguments exist to prove that Tiahuanaco was built by either *Aymara*- or *Quechua*-speaking peoples, and that the problem will remain unsolved until a study of the relationship of the two languages has been made.

The cultures which followed the decline of Tiahuanaco and Pucara are still relatively unknown. This interval, intermediate between Tiahuanaco and *Inca*, has been called the "Chullpa Period," and, although many chullpas probably were built before the arrival of the *Inca*, their construction was not confined to this period.[5] They have also been reported from regions outside modern *Aymara* territory (Means, 1931, p. 201), although some are in areas said by Rivet to have been formerly inhabited by *Aymara*-speaking peoples.

Chullpas (pl. 101), usually located on tops of hills, are round or rectangular towerlike structures with sloping or straight walls, built of rough or dressed stones, adobe, or various combinations of stone and adobe (Tschopik, M. H., Some Notes, n. d.). Within or below the tower is a chamber entered by a small door which almost invariably faces east. Occasionally, there are two floors, but more often only one. The ceiling of the chamber may be corbeled or, in the case of very small chambers, formed by a single, flat stone. In the former type, the roof is either of the small stones and adobe which comprise the inner core and corbeled dome, or is formed by continuing the outer veneer to cover the inner core. Generally, there is a cornice. These structures were used by the *Aymara* as burial places for chiefs and important persons. (See Death, p. 551.) Although no description of the contents of an undisturbed chullpa exists, these tombs appear to have contained clothing, metal ornaments, pottery, and matting.

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[4] I am indebted to my wife, Marion H. Tschopik, for writing the archeological summary. (See also Bennett, pp. 61-147, this volume.)

[5] The problem is complicated by chullpas having been looted since the Spanish Conquest. Therefore, the chronological place of chullpas must rest on the analysis of surface sherds until stratigraphic work has been done.

The most famous and impressive chullpas are those of Sillustani on Lake Umayo. This site was probably the cemetery of the *Colla* chiefs whose capital was Hatuncolla, only a few kilometers away. Part of Sillustani can be assigned to a pre-*Inca* Period, for it is known that the *Colla* of Hatuncolla were defeated by the *Lupaca* of Chucuito and their town destroyed during the reign of the *Inca* Emperor Viracocha, before the conquest of the Collao. The largest Sillustani chullpas are round or square, of well-dressed stones with a cornice, and have inner vaulted cores of adobe and rubble (Bandelier, 1905, pls. 10, fig. 1; 11; 12, fig. 1). Occasionally snakes or animals are carved in low relief on one or more of the dressed stones. The walls slope outward slightly but were probably not carried to a corbeled dome. The roof of the chamber is formed by the inner core. Similar chullpas of dressed stone with snakes and animals in relief exist at Viscachani (south of Pucara), Paro Paro (northeastern shore of Lake Titicaca, between Moho and Vilquechico), Qutimpu (in the hills southwest of Chucuito), Kacha Kacha (between Acora and Ilave) and at Pirapi in the Province of Paracajes, Bolivia (Posnansky, 1938, figs. 3, 59–61).

A second type of chullpa at Sillustani is built on a foundation of dressed stone with inner walls of rough stone and outer walls of white clay mixed with straw (Bandelier, 1905, pls. 12, fig. 2; 15, fig. 2). Similar chullpas exist at Viscachani and Katati (between Juliaca and Lampa).

Other types may be seen on the northeastern shores of Lake Titicaca, particularly at Quenellata (Squier, 1877, p. 387, "Quellenata") near Vilquechico and at Paro Paro. At Arku Punku, near Qutimpu, are chullpas made of roughly shaped field stones which have corbeled dome roofs with or without cornices. Bewteen Juli and Pomata on Challa Pampa and south of Pomata on Lampa Kucho Pampa are others of this same general type.

Chullpa sites are so common in the Titicaca Basin that it is impossible to enumerate them all. It is highly probable that they date from various periods. In most cases not enough work has been done to place them chronologically with accuracy, and much of the pottery found on the surface is still unindentifiable. At Sillustani and Qutimpu, however, almost no Cuzco *Inca* sherds have appeared, nor is there any evidence of Decadent Tiahuanaco culture. On the other hand, extensive work at Arku Punku shows an abundance of *Inca* pottery mixed with local contemporary styles (Tschopik, M. H., Some Notes, n. d.). Thus it seems fair to assume that chullpas were erected for a considerable period before the *Inca* conquered the *Aymara* and continued to be built under *Inca* domination.

Apart from burial in chullpas, other interments were made in a variety of underground cists or graves. Graves marked on the surface by stone circles of varying dimensions occur at many sites with and without chullpas and contain as many as 30 individuals with a few funeral vessels and occasional stone bowls. The pottery is quite distinct from that found in and around chullpas but has not been satisfactorily placed chronologically.

Underground, beehive-shaped cists lined with large rough stones have also been noted. They contain fewer burials than the last. Grave offerings comprise pottery and some metal. Those opened near Chucuito contain *Inca* vessels of the Cuzco style and contemporary local wares (Tschopik, M. H., Some Notes, n. d.). It appears that this type of burial was not used until after the *Inca* conquered the *Aymara.*

Hilltop fortresses are also common in the Titicaca Basin, and are often associated with chullpas as at Pucara, Chejnarapi (northeast of Orurillo, Perú), Pirapi in Bolivia (Posnansky, 1938, fig. 3), and elsewhere.

Towns located on hilltops probably belonged to a pre-*Inca* Period, although their pottery is insufficiently known to aid dating. Hilltop towns are known at Paro Paro, Mercaymarca (Moho, Perú), and Siani (near Conima, Perú); others exist in Bolivia.

After the *Inca* Emperor Pachacuti had subdued the more southern *Aymara,* the latter erected various structures under *Inca* supervision, the most famous being the buildings on the Islands of the Sun and Moon. At Carpa, on the northeastern shore of Lake Titicaca, are other *Inca* structures (Squier, 1877, p. 393, "Acarpa"). Tambos, or rest houses, built include the one at La Raya (Squier, 1877, p. 401), and others mentioned by Cieza in what is now Bolivia. In Chucuito, recent excavations have uncovered Inca Uyu, which was probably an *Inca* temple or temple enclosure. Additional buildings constructed during the *Inca* Period exist throughout the Titicaca Basin.

To sum up, Titicaca Basin archeology is still in an incipient state. Among the most important problems confronting the archeologist are the following: The characteristics of the period immediately following Decadent Tiahuanaco culture; the identification and description of local pottery styles of the Titicaca Basin and their chronological relationships; and the ethnic identification of the builders of these local cultures.

DOCUMENTED HISTORY

The Inca conquest of the Aymara.—Prior to domination by the *Inca,* the *Aymara* were divided into a number of independent, warring states, the most powerful of which were the *Colla,* with their capital at Hatuncolla, and the *Lupaca,* with their chief city Chucuito.[6]

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[6] I am indebted to Mr. John H. Rowe for making available to me his careful study entitled "The Inca Conquest of the Collao." This manuscript is on file in the Peabody Museum of Harvard University. In his analysis, Mr. Rowe has relied chiefly upon Cieza de León, 1880, 1924; Cobo, 1890–93, vols. 1–4; Sarmiento de Gamboa, 1906; and Cabello de Balboa, unpublished manuscript dated 1586 in the New York Public Library.

The chiefs of these two states, Zapana at Hatuncolla and Cari at Chucuito, were deadly rivals, although the latter seems to have had the upper hand. When, during the reign of the *Inca* Emperor Viracocha (about 1430), the *Inca* began to push southward, absorbing the *Canchi* and the *Cana*, Cari and Zapana both sent envoys to the Emperor, asking for his friendship. The Emperor decided to ally himself with Cari, whereupon the latter was attacked by Zapana, who was then defeated and killed, and Hatuncolla sacked by the *Lupaca*. When the Emperor arrived, he was not overpleased with Cari's victory, as be had planned to play one chief against the other. An alliance between the Emperor and the *Lupaca* was, however, confirmed in Chucuito.

Hearing of unrest in the Collao and dissatisfied with alliances, Emperor Pachacuti (1438–71) sent an expedition which conquered the *Colla* and *Lupaca* early in his reign; subsequently, he personally put down a rebellion in Ayaviri and conquered a part of Omasuyu, Bolivia. Late in his reign, while Pachacuti was invading the Antis, centers of Collao rebellion developed at Hatuncolla, Chucuito, and Azángaro, and fortifications were built at Asillo, Arapa, and at Pucara.

The Collao revolt was finally crushed by Tupac Yupanqui (1471–93), who pursued the rebellious *Lupaca* as far as Río Desaguadero, where peace was made. The *Inca* then went on to conquer the other *Aymara* subtribes, and *Aymara* territory was garrisoned by *Inca* troops. Colonists from other parts of the Empire were settled there, while many *Aymara* were sent down to the Coast and jungle to cultivate tropical products for the Collao. The Collao, however, remained subject to their former chiefs, and many of the local dynasties persisted. Hatuncolla was made a center of *Inca* administration. Roads and rest houses (tambos) were constructed according to the *Inca* system, and temples were built on the Island of the Sun and elsewhere. During the reign of Huayna Capac (1493–1527), *Aymara* troops fought in the *Inca* army, although under their own leaders. In the civil war between Huascar and Atahuallpa, the *Aymara* remained loyal to the former.

The Spanish Conquest.—Expeditions of reconnaissance in the Collao preceded actual conquest, as the Spaniards had been told in Cuzco about Lake Titicaca to the south and of an island in it with a large temple covered with gold. Diego de Agüero and Pedro Martínez de Moguer were commissioned in 1533 to explore the Collao. They returned after 40 days and reported that although the country was cold and remote from the sea, it was densely populated.

The first important military expedition into *Aymara* territory was undertaken by Diego de Almagro in 1535. The way was paved for the conquest by the puppet ruler, Manco Inca, who sent his brother, Paullo, and three Spanish soldiers into central Bolivia via the royal road. Later, Captain Savaadra with 150 Spaniards followed and were joined somewhat later by Almagro himself with more troops. Indians for the expedition were procured by cruel press-gang methods, and many died on the journey, leaving a bad impression of the Spaniards throughout the region. Almagro's expedition finally reached the Chilean coast at Copiapó.

Meanwhile, Manco Inca, assisted by *Aymara* troops under Llicllic, had laid siege to Cuzco. Almagro returned from Chile in time to raise the siege, only to be defeated by Francisco Pizarro's troops in 1538. After the defeat of Manco, the *Lupaca* asserted their independence and attacked their old enemies, the *Colla*, who appealed to the Spaniards for help. Hernando Pizarro, with mixed Spanish and Indian forces, defeated the *Aymara*, and marched across Bolivia to Cochabamba, receiving the submission of the Indians along the way. After an unsuccessful revolt, the Indians of Cochabamba were finally crushed. By 1542 the Viceroyalty of Perú included all *Aymara* territory, from Ayaviri to Caracolla.

The Colonial Period.—Next to gold, the chief interest of the Spaniards was in Christianizing the Indians; it has been said that the *Aymara* were conquered more by the Dominican fathers than by Spanish soldiers. The first Dominican missionary in *Aymara* territory was Fray Tomás de San Martín, who arrived in Chucuito in 1539. By 1550 monasteries and houses of this Order were in all the important *Aymara* towns around Lake Titicaca. An immediate attempt was made to stamp out idolatry, the methods employed being so stringent that the formal temple cults were exterminated early in Colonial times. But, failing to understand the new religion which had been thrust upon them, the *Aymara* secretly kept up their former religious practices. The exploitation of the Indians enriched the Dominican missions to such an extent that other sects became jealous. On the pretext that they had exacted excessive tribute from the Indians, the Dominicans were expelled by a decree of Viceroy Toledo to make room for the Jesuits and other orders.

The Colony attained its golden age under the Jesuits, who officially arrived in the Collao in 1577. The rich Spanish cities, particularly Chucuito and Juli, were rivaled only by Cuzco and Lima in their splendor, and many great churches were built. Although the suppression of the native religion proceeded unabated, some of the best sources on *Aymara* language and customs, namely those of Bertonio and Cobo, were written by Jesuits during the early 17th century. The Jesuits, however, became too influential and controlled the greater part of both the lands and the capital of the Colony. In 1767, after two centuries of domination, they were expelled from America by Charles III.

The economic system which financed the opulent Viceroyalty of Perú was based on a systematic exploitation of the Indians by both Church and State. All conquered lands belonged to the Spanish Crown, and, although the system of encomiendas or land grants was begun nominally to instruct the Indians, it served actually to exploit them. The first encomiendas in *Aymara* territory were established soon after the Conquest. As the Spaniards were interested not in cultivating the land but in exacting tribute, they left the social organization of the Indians intact as far as possible. Late in the 16th century, Toledo confiscated the ayllu lands and divided them among the ayllu people in order to assure the payment of tribute, although in more remote regions this new system of land ownership was ignored in practice. Because of this confiscation and because certain areas had been decimated by the Conquest, Toledo had large numbers of *Aymara* moved from one part of the Collao to another.

Under the encomiendas, the *Aymara* were virtually slaves, serving the Spaniards chiefly in four ways: as food producers and payers of tribute, as household servants, as laborers in the mines, and as workers on the coca plantations in the jungles. In the mines of Carabaya and Potosí, hundreds of thousands of *Aymara* died because of the unaccustomed labor, strange environment, undernourishment, and ill treatment. La Barre estimates that 14.28 percent of the native population were used for forced labor at a single time (La Barre, ms.).

Under Toledo the oppression of the Indians affected the most intimate aspects of their lives. They were forbidden to sleep on the floor or to paint their faces and were forced to adopt a new style of dress and to live only in certain barrios of the towns.

Finally, in 1780, a series of rebellions and counter-rebellions broke out and continued sporadically until 1821, when the Viceroyalty was overthrown and independence from the Spanish Crown proclaimed. In the great revolt of 1780, the *Aymara* fought against Spanish oppression and were joined later by the *Quechua* under Tupac Amaru (Lewin, 1943). Whole regions of the Collao were virtually depopulated, and great numbers of Spaniards were killed. In Sorata, the entire White male population was massacred and Chucuito was burned to the ground. Three years after the execution of Tupac Amaru, his nephew led a second revolt in Azángaro. Vilcapasa, also from Azángaro, burned Huancané and besieged Puno. In 1814, Pumacahua continued the rebellion, took Puno, and marched on La Paz. These rebellions and the series of epidemics which followed soon after continued the decimation of the *Aymara* population which had begun with the Conquest and had been furthered by Colonial oppression.

The Republican Period.—Under the Republic, perhaps the most significant changes wrought in *Aymara* society were those brought about by land laws and new concepts of property. As mentioned previously, communal ownership of land by ayllus was abolished in early Colonial days by Toledo. Republican legislation, especially in Bolivia, has also formally abolished ayllu land ownership (La Barre, ms.). The result is that individual land ownership and new concepts of inheritance, especially affecting land owned by women, has tended to break down both ayllu organization and the aboriginal patrilineal extended family. Individual competition is beginning to replace the former cooperation along extended family lines. The Colonial encomiendas have disappeared, but a use of land for agriculture and stock breeding has fostered the rise of many haciendas.

Increased trade and better transportation facilities since about 1850 have leveled local *Aymara* culture differences, particularly home industries. Cheap imported textiles, dyes, and utensils have greatly changed the outward appearance of *Aymara* life in recent times.

Acculturation.—On the basis of their history, the *Aymara* appear to have passed through at least three periods of acculturation. The following highly tentative outline attempts to summarize the probable changes in *Aymara* culture during these periods.

(1) 1430–1540: During the era of *Inca* influence, *Aymara* culture was considerably enriched. The introduction of the *Inca* aristocracy increased the social and political complexity, although in general local dynasties remained. New trends in religion and new temple cults, particularly that of Viracocha, were introduced; ritual and mythology were enriched. Under the *Inca*, foods were available in greater variety and foods of "foreign" origin in greater quantity. New art styles, especially in ceramics and metallurgy, were introduced.

(2) 1540–1780: The Spaniards enriched *Aymara* culture in material goods and greatly modified religious practices. They introduced new domesticated animals, cultivated plants, plow agriculture, a new type of loom, glazed pottery, and iron tools. Dress styles were modified along Spanish lines; head deformation was abandoned.

Whereas the high officials of the political hierarchy were replaced by Spaniards, the native officers who governed the lives of the majority of the *Aymara* remained. Consequently, the earlier *Aymara* states tended to give way to new political units formed around the towns, which were the centers of administration. Formal organized warfare disappeared early in Colonial times. The abolition of ayllu lands was not taken seriously in most regions, and social organization remained essentially intact.

In the realm of religion, the temple cults, priesthood, and all exoteric manifestations of the religion, including dances and the formal mythology, disappeared. The more "personal" or esoteric aspects of the old religion, however, continued. Interment of the dead in church cemeteries replaced burial in chullpas. Beliefs about the afterworld became Christianized.

(3) 1780–present: Family life was greatly disorganized and change in social organization was begun by the series of rebellions which terminated in independence. Ayllu and extended family organization, including kinship terminology and behavior patterns, began to be modified. European articles introduced in quantity have brought about recent changes in material culture. This, together with the disorganization of social life, has tended to eliminate interest in the old art styles and in craftsmanship. Painted pottery, vegetable dyes, metallurgy, and the art of stone cutting have disappeared in many places in recent times.

SOURCES

As compared with the vast bibliography relating to the *Quechua*, important literature dealing with the *Aymara* is surprisingly meager. The most important 16th-century account concerning the *Aymara* is that of Cieza de León (1880, 1924). Cieza traversed the Collao and is an important eye-witness for this early period. The anonymous author of the "Sitio del Cuzco" (1934) and Cristóbal de Molina of Santiago (1916) are the most important sources of the Spanish Conquest. The Relations of Mercado de Peñalosa (*Pacaje*) and Ulloa Mogollón (*Collagua*), published in the "Relaciones geográficas de Indias" (1881–97), and Martín de Morúa's History (1922–25) contain useful ethnographical material. For the 17th century we have the excellent first-hand accounts of the Jesuit fathers, Bertonio (1879 a) and Cobo (1890–95), both of whom resided for a number of years among the *Lupaca*, and data which Garcilaso de la Vega gathered (1723) from informants in Cuzco. For the 18th century, possibly owing to widespread unrest which marked the end of the Viceroyalty, little material on the *Aymara* is available, although Lewin (1943) contains scattered references. For the late 19th century, Forbes (1870) and Bandelier (1910; also see ms.) left important records. Since 1900 many travelers and students have written about the *Aymara*, the more important being those of La Barre (ms.), Paredes (1936), Métraux (1934 a), Cuentas (1929), Romero (1928), McBride (1921), and Rouma (1913, 1933).

CULTURE

SUBSISTENCE ACTIVITIES

Farming.—The *Aymara* divide the year into two vaguely defined seasons. The rainy season, roughly from October through April, is called "green time" or "rainy time"; the dry season, from May through September, is called "dry time" or "ice time." In Bolivia, La Barre found four seasons designated by similar descriptive names (La Barre, ms.). According to a second system, the year has five seasons, each named according to its agricultural activity.

The complete range of cultivated food plants and their varieties is not known. La Barre obtained a staggering list of 209 descriptive names for potatoes in Bolivia. All potatoes grown on the altiplano are said to be varieties of *Solanum tuberosum* (La Barre, ms.). In the District of Chucuito alone some 40 varieties of white potato (Q'ENI or SAYA Č'OQE) are recognized, some 10 types of "bitter" potato (LUK'I Č'OQE), 10 varieties of ocas (*Oxalis tuberosa*), 5 of UḼUKU (*Ullucus tuberosus*), 6 of ISAÑU (*Tropaeolum tuberosum*), 6 of quinoa (*Chenopodium quinoa*), 2 of KAÑAWA (*Chenopodium* sp.), 6 of maize (*Zea mays*), 3 of habas or "broadbeans" (*Vicia faba*), 6 of barley, and 2 of wheat; the latter three crops are of European origin. In addition, some communities raise onions, garlic, and other garden crops of European origin. Although the staple crop varies locally, the three most important *Aymara* food plants at the present time are potatoes, quinoa, and barley. Maize is cultivated in quantity on the altiplano only in favored localities such as Conima and Copacabana, but is never the staple crop. On the high pampa away from Lake Titicaca, KAÑAWA and "bitter" potatoes form the principal crops. Above 15,000 feet (about 4,600 m.) altitude, little if any farming is done.

Planting and harvesting dates are adapted to the local environment and vary regionally, depending upon when the rainy season begins. The *Aymara* on the Peruvian shore of Lake Titicaca usually plant early potatoes and maize in late August and harvest them late in February. Late potatoes planted in November mature in April. Ocas and quinoa are planted in September or October and harvested in April. Barley sown in October or November is ripe in late April or May. According to Bandelier, the *Aymara* on the Bolivian shore of Lake Titicaca plant and harvest potatoes, ocas, and quinoa a month earlier than the above dates, and seem to plant and harvest barley and maize from 1 month to 2 months later than the Peruvian *Aymara* (Bandelier, 1910).

There are four types of arable land. "Valley-bottom fields," located in little valleys which descend from the hills to the shore of Lake Titicaca, are considered the best. They have the deepest topsoil and usually may be irrigated. The second best, the "lake-edge fields," do not have to be irrigated, but occasionally are flooded or damaged by mineral salts in the lake water. The third best, the "hillside fields," sometimes may be irrigated, but the topsoil is thin and stony. The poorest fields are on the flat pampas away from the lake shore, where the soil is bad and irrigation is not practiced. Soils are classed and graded into three types according to their physical properties and ability to hold water. The best is a rich, ashy loam, often an archeological refuse deposit, called "big earth" or "earth with ashes." The next best is called "sandy earth," while the worst, "red earth," is a hard, stony clay.

There is little concrete information available on amounts of land owned or utilized by present-day *Aymara* biological families. In the town of Chucuito (Perú), a typical "wealthy" *Aymara* who supports a wife and one child owns 0.75 acre of good land, 1.45 acres of medium land, and in addition receives the use of 0.75 acre of good land which is owned by his Mestizo landlord. A typical *Aymara* of medium circumstances who supports a wife and one child owns 0.68 acre of good land and 0.94 acre of poor land. A typical "poor "*Aymara* in Chucuito who supports a wife and two children owns 0.11 acre of poor land and in addition receives the use of 0.57 acre of medium land which is owned by his Mestizo landlord.

The following table gives the yield in pounds and by crops for the land (by acreage) which is owned or utilized by three typical *Aymara* of Chucuito; these three individuals, whose land holdings have been given above, are typical examples of the "wealthy," "medium," and "poor" classes among the *Aymara* of this town.

Table 1—*Crop yield (in pounds) and landholdings of three typical Aymara individuals in the town of Chucuito, Perú*

Crop	Crop yield			Acreage			Total yield
	Good	Medium	Poor	Good	Medium	Poor	
WEALTHY *AYMARA*							
Potatoes	2,500	2,625	----------	0.60	[1] 0.75	----------	5,125
Barley	1,875	2,875	----------	[1] .11	[1] .70	----------	4,750
Quinoa	1,875	----------	----------	[1] .45	----------	----------	1,875
Habas	405	----------	----------	.15	----------	----------	405
Wheat	650	----------	----------	[1] .19	----------	----------	650
MIDDLE-CLASS *AYMARA*							
Potatoes	1,875	----------	----------	[1] .46	----------	----------	1,875
Barley	750	----------	1,250	[1] .11	----------	[1] 0.60	2,000
Quinoa	----------	----------	875	----------	----------	[1] .34	875
Habas	270	----------	----------	[1] .11	----------	----------	270
Wheat	----------	----------	----------	----------	----------	----------	----------
POOR *AYMARA*							
Potatoes	----------	625	----------	----------	0.19	----------	625
Barley	----------	----------	750	----------	----------	[2] .26	750
Quinoa	----------	250	----------	----------	.08	----------	250
Habas	----------	270	----------	----------	.15	----------	270
Wheat	----------	----------	----------	----------	----------	----------	----------

[1] Land owned by the individual.

[2] This individual owns 0.11 acres of this land.

Various adaptations of crop rotation and fallowing increase soil productivity. In more favored regions (Chucuito, Conima, Copacabana), crop rotation has made possible the continuous planting of fields year in and year out. Here the order of crops is potatoes, ocas, quinoa or barley, and then potatoes again. The true reasons for such rotation are not recognized, although the succession of crops is traditional. Elsewhere (Juli, Desaguadero), virgin soil is first planted with potatoes and next with quinoa or barley. Then the field is allowed to lie fallow for 3 years. On the high pampa, a field is planted first with "bitter" potatoes, next with KAÑAWA, and then not planted again for some 10 years. In some areas (Ichu, Ilave, Acora) where the soil is relatively poor, an elaborate system of crop rotation has been evolved. The land of an ayllu or of several contiguous ayllus is divided into a number of tracts (AINOQA—see Social Organization, p. 540). Each family owns (or in Bolivia receives the use of) a plot of land in each tract and each year plants all of it with the same crop or allows it to lie fallow. The ayllu headman (HILAQATA) supervises this system of crop rotation and fallowing, and receives a share of the crops as compensation. The tracts which are not planted are used as communal grazing land.

Only a small percentage of *Aymara* cultivated land is irrigated. Irrigation ditches are dug under the direction of the ayllu headman. Usually they are small and poorly made and must be re-dug from the water source each year. A form of subsoil irrigation is practiced sporadically; water is allowed to soak through the topsoil to an impervious layer of rock, whence it travels down the slope and is tapped below where needed. Water rights are perpetual; fields which have been irrigated since before the memory of living man have this right forever. A man must ask permission to draw water across another man's land for irrigation purposes, but is never refused. Only small springs may be owned individually; the more important ones are ayllu property. Neither flood-plain irrigation, damming of arroyos, nor hand watering of fields is practiced.

Terraced agriculture is sporadic throughout *Aymara* territory and depends upon topography; few terraces are irrigated. Terraces are generally small, irregular, poorly made, and faced with dry-stone masonry walls; usually, they are constructed and owned by individuals. In some regions prehistoric terraces are utilized.

The boundaries between fields are marked by stone walls, sod-block walls, or by piles of stones.

The following agricultural implements are used by the *Aymara*: (1) Digging stick with handle and footrest (fig. 44, *d*), now with an iron point, but formerly with a tip of fire-hardened chonta wood or possibly of bronze; (2) clod crusher with roughly chipped stone head bound to the shaft (fig. 44, *c*) or with the shaft inserted through the hole of a ground, doughnut-shaped stone head; (3) adz-hoe made of a flat iron blade bound to a forked-stick shaft (fig. 44, *a*); (4) threshing stick which consists of a curved pole, the head of which is cross-lashed with rawhide (fig. 44, *b*); (5) simple wooden plow with iron share, used with yoke of oxen; (6) hoe with a llama-scapula blade (Bolivia); (7) sickle for cutting barley made with an iron blade lashed into a cleft stick.

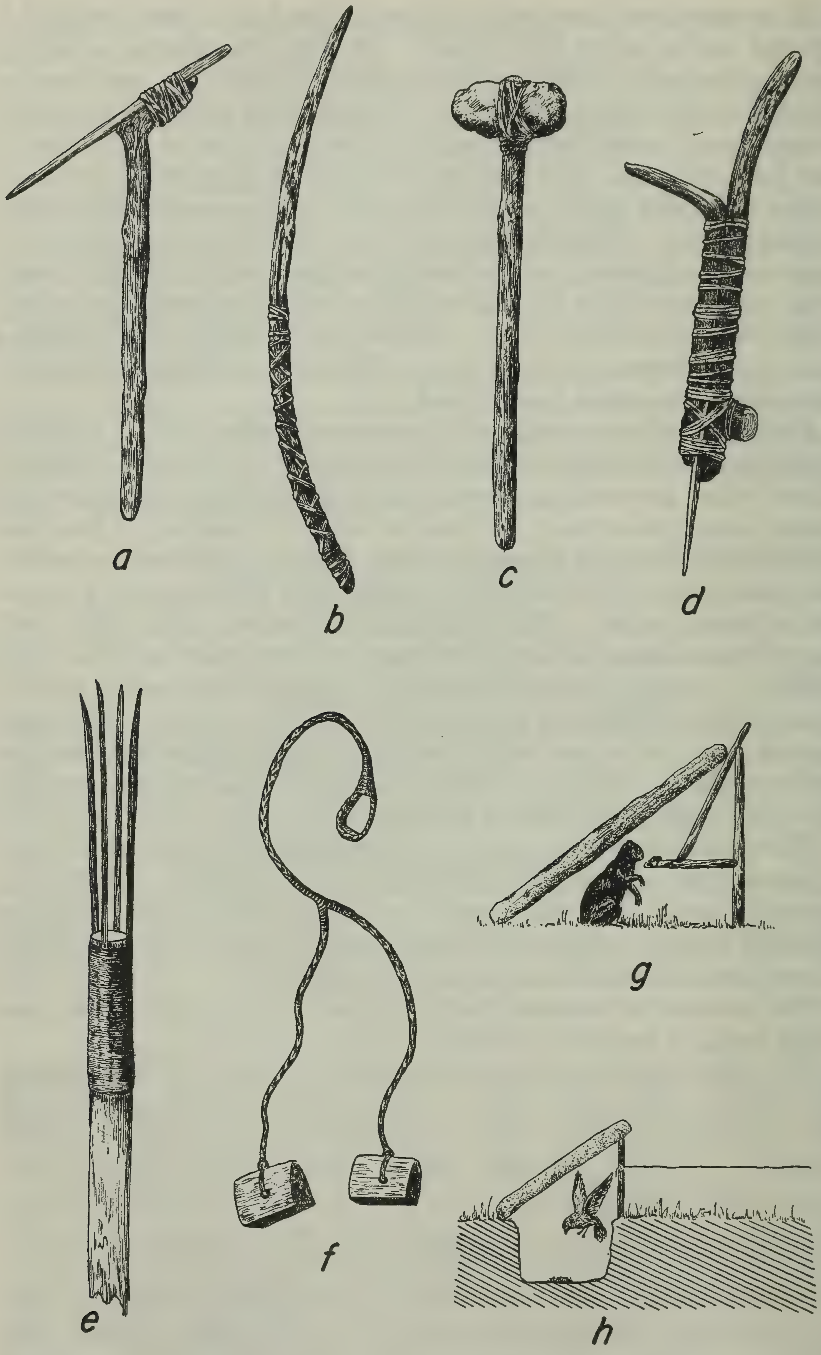

Figure 44.—*Aymara* implements. *a*, Adz-hoe; *b*, threshing stick; *c*, clod crusher; *d*, digging stick; *e*, detail of fish spear, Chucuito, Perú; *f*, bolas; *g*, rodent trap; *h*, bird trap.

Both men and women perform agricultural tasks. Men dig with a stick, plow, spread fertilizer, thresh, and do the initial winnowing. Women plant. Both sexes crush clods, weed and bank potatoes, and harvest (pl. 102, *top*). Class distinction does not enter into agriculture; no one is too proud to farm.

In clearing a new field, the weeds are cut, piled, and burned. The stones are removed to be built into walls around the field or piled in the corners. After the last rains, virgin soil is broken with the digging stick while the ground is still soft. When the sod blocks are dry, they are broken with clod crushers; occasionally, they are left to catch and hold the first rain of the next season before they are broken.

After the first rains, fields are plowed, and the larger lumps of earth broken with clod crushers. The digging stick is used on terraces and in small fields where a plow cannot be used.

Fertilizer is used only for potatoes. The dry manure of sheep, cattle, or llamas is pulverized and scattered broadcast over the field. Formerly, guano from the Coast was used. In some regions (Acora, Peninsula of Chucuito), where temporary corrals of poles and ropes are erected nightly for livestock, the corral is moved daily over potato fields which are fertilized by the manure. Ashes from the kitchen are also scattered over a potato field.

Grain is sown broadcast. Tubers and maize are dropped in groups of two or three at intervals of a foot (0.3 m.) or less into the furrows. Potatoes and other tubers are weeded and banked with adz-hoes twice in a good year, and receive a final banking 2 months before the harvest (pl. 102, *bottom, left*). Grains are weeded by hand from time to time, and the weeds given to the livestock for fodder.

Small watch houses guard the fields from birds and thieves when the crops are mature and ready to harvest (pl. 110, *bottom*). Birds and small mammals are trapped, or frightened away with slingstones. Scarecrows of poles and old clothes are erected in grain fields to frighten birds. In general, however, there are no adequate techniques for guarding against animal and insect pests.

Potatoes and other tubers are ready to dig when the plants have begun to dry. Dug tubers are piled in the field in various cleared spots tramped hard. Quinoa is uprooted, the earth removed, and the grain beaten out by a line of men with threshing poles on a square in the field which has been stamped hard (pl. 103, *top*). The grain is swept into piles with grass brooms, then winnowed over a blanket, the grain being held in the fold of a square cloth tied over the right shoulder and under the left arm.

In May, seed potatoes and other tubers are selected with great care. Potatoes are divided into LUK'I (bitter) and SAYA (white) groups but are not separated by color. There is no careful seed selection of quinoa; all colors are mixed.

Agricultural rites.—Although agriculture ritual is extremely variable regionally, it chiefly concerns potatoes. All agricultural activities are governed by phases of the moon, some of which are considered propitious while others are not. Dreams also play an important part in determining the proper time for farming. Divination is thought to be extremely important to the success of agricultural activity and accompanies all of its phases. Usually, the owner of the field himself divines the future. (See Divination, p. 563.) In Bolivia, when clearing a new field, the weeds are burned and the crop predicted by the direction of the smoke. Before plowing a new field, alcohol is sprinkled on the ground and a spirit called PAČA MAMA is invoked (Paredes, 1936, p. 82). Blood of sacrificed animals is also occasionally used. At planting, seed potatoes are taken from a sack by twos; if an even number remain in the bottom, good fortune is indicated. If an eagle or condor should fly over during planting, it is a good omen. During Carnival (in Perú), a rite is performed for the growing potatoes: The owner of the field burns coca, llama fat, and Q'OA (*Mentha pulegium*) in a ring of manure, open to the east, as an offering to the place spirit. A perfect potato plant is uprooted and the potatoes counted off by twos to divine the outcome of the crop. Then the plant is replanted and moistened with wine, after which the owner and his friends feast and dance. At the potato harvest, the men swing a girl by her legs and arms over the undug potatoes so that the harvest will be large. Finally, the fertility ceremony (the ČOQELA rite) is performed publicly after the harvest so that the next year will bring good crops. (See p. 567.)

During harvest (Bolivia), libations of chicha and coca quids are offered to PAČA MAMA, and there is a fiesta in the fields. Unusual potatoes are considered lucky and offered homage. In Perú, the white magician (PAQO) is frequently called in after the harvest to make sacrifices at people's houses. He selects the most perfect produce and makes offerings to it, then sacrifices a llama, whose blood is offered to the east, to the place spirit, and to the perfect vegetables.

In Bolivia, a fiesta is held for the spirit of fortune and prosperity, who is associated with the summer solstice, sex, and fertility. Offerings of the first fruits and of miniature objects are made (Paredes, 1936, p. 32). In western Bolivia, the blood of sacrificed animals is scattered on the fields before planting. Special rites dedicate new irrigation ditches (Bandelier, ms.). Marking the boundaries for new fields occasions a celebration.

When there is no rain, a rite with frogs is held on the summit of a high hill. (See p. 567.) Sacrifices are made to lakes and lagoons to bring rain (La Barre, ms.). Hail is greatly feared and is driven away by burning ají (peppers) on live coals and by mistreating the children and dogs until they howl.

Gathering wild foods.—Gathering wild foods is relatively unimportant. The roots and shoots of totora (*Scirpus tatora*) are eaten raw. A number of wild greens are eaten raw or cooked in stews. Certain cactus fruits are eaten fresh and their juice used to sweeten and color chicha. Many wild plants are used as condiments (in Bolivia, some of these are cultivated), and several are made into teas. A number of small shrubs are dried and used for fuel. Much dry llama manure is also collected for fuel.

Certain towns specialize in making salt by evaporating water from salt lakes in shallow basins of porous lava or pottery. Other towns collect edible clays, though some types of such clay are secured from *Quechua* territory by barter.

Domestic bees are not kept. Hives of wild bees built in stone walls in the spring are torn apart (the bees are not smoked out) to obtain the honey. The comb is squeezed to extract the honey, but the wax is not eaten.

The eggs of all waterfowl and some other large birds are eaten. Usually, the eggs are taken from the nests during a fishing expedition to the totora reed swamps. Edible larvae are collected in certain rivers (Ilave, Desaguadero).

Hunting.—Although the mammalian fauna of the altiplano is scant, bird life is abundant. Hunting is unimportant in *Aymara* economy and techniques are not elaborate. The principal gear consists of plaited woolen slings and bolas with wooden blocks or grooved stones for balls (fig. 44, *f*). Throwing clubs, bows and arrows, pitfalls, and spring-pole traps are not used. Deadfalls are used in parts of Bolivia (La Barre, ms.).

A surround is used to hunt foxes, viscachas, and vicuñas. A hunting party of both sexes forms two lines at either side of, or a ring around, a fox's den. Accompanied by dogs, they approach, beating drums and blowing wind instruments. When the fox is surrounded, the dogs are turned on it or it is dispatched with clubs. Fox skins are sold or, in some regions, used as ornaments for dance costumes. In Bolivia, large numbers of men with a long rope, from which dangle woolen threads and sticks, surround a herd of vicuñas (La Barre, ms.).

The most elaborate technique is that used to hunt vicuñas. A long fence (some 1,640 feet (500 m.) by 4.9 feet (1.5 m.) high) is built across a pampa, and consists of forked poles planted about 9 feet (3 m.) apart and joined by a cord from which hang long tassels of black alpaca wool. Bolas are placed across the forks. The hunters, equipped with noise-makers and dogs, drive the vicuñas toward the fence. The tassels, blowing in the wind, frighten the animals so that they jump at the forks, and their feet become entangled in the bolas.

A simple figure-four trap baited with quinoa flour is used in fields to kill wild guinea pigs and field mice (fig. 44, *g*).

Rats and mice in storehouses are poisoned with ground WAXANQA (a root not yet identified) mixed with quinoa dough. Foxes are occasionally killed with poisoned meat (Bolivia).

Viscachas and foxes are smoked out of their holes and killed with sticks. Wild guinea pigs are flooded from their holes and taken in sacks (La Barre, ms.). In Bolivia, pumas are killed with slingstones, and foxes are hunted with bolas.

Both bird pests and edible wild doves are taken in a pit trap, with grain for bait and a flat stone lid held on edge by a stick delicately set (fig. 44, *h*). When the birds are inside, the string attached to this stick is pulled by a person concealed at the edge of the field.

Tinamous coming to small water holes in the pampa to drink are caught in a series of small nooses suspended from a cord stretched between grass clumps around the water. No bait is used. In Bolivia, these birds are also driven into nets (La Barre, ms.).

Ducks, grebes, and gallinules are also taken with nooses, a series of which are strung at an elevation of several inches between two clumps of totora reeds.

Ducks are lured into the totora marshes by imitating the whistle of the flightless grebe (no instruments are used) and by making swishing noises with the hand in the water. Then they are killed with slingstones, poles, or bolas. Occasionally, they are taken with the big fish net, which is hung over clumps of reeds and pulled down upon the ducks when they swim in.

Little ritual is associated with hunting. The fertility and rain ceremony (ČOQELA rite) portrays a vicuña hunt, but is now associated with agriculture (see p. 567). The Bolivian *Aymara* believe in a benevolent spirit of the pampa who owns all the animals and often takes the form of a condor. The vicuña is his beast of burden and the fox his dog (Paredes, 1936, p. 40).

Domesticated animals.—The aggregate of domesticated animals varies regionally.[7] Few llamas are kept in the towns on the edge of Lake Titicaca unless they are situated on large plains. Away from the lake shore, the Indians specialize in breeding llamas, alpacas (also crossbreeds of these), and sheep. On the high pampa, where it is too cold even for llamas, only alpacas are raised. Pigs are kept for meat and lard, cattle for milk and for plow animals, and sheep for wool, meat, hides, and occasionally milk. Guinea pigs are commonly raised for food. Chickens are common, and in some regions pigeons are kept. Donkeys are numerous, but horses are rare. In general, animals are treated kindly. Not many kinds of pets are kept, although dogs and cats are universal.

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[7] Although Chucuito (Perú) is not primarily a stock raising community, a typical wealthy *Aymara* of this town owns 1 horse, 4 cows, 5 pigs, and 15 sheep; a typical "middle-class" *Aymara* owns 1 llama, 15 sheep and 8 pigs; a typical poor *Aymara* owns 8 sheep and 3 pigs. These three individuals are the same ones whose landholdings are given in the section on Farming (p. 514).

Herding is done usually by women and children. Animals are housed near the dwellings in roughly rectangular corrals of dry-stone masonry, sod blocks, or adobe. In some regions, temporary corrals are built of poles and ropes. Pack llamas and pregnant llamas are kept in separate corrals. The latter are not assisted during birth, but the young animals receive special care. Rams, and occasionally (among the Peruvian *Aymara*) llamas and alpacas, are castrated, although this practice may not be aboriginal. Llamas and alpacas are in heat during June and are helped when mating.

The ears of llamas are often pierced for colored yarn tassels that serve as property marks and as decorations for favorite beasts. In some regions, red ocher is rubbed on llamas and alpacas to indicate ownership and to prevent pack animals from becoming sick or tired. Occasionally, llamas and sheep are earmarked.

Guinea pigs live in the kitchens or in holes and passages left under the platform beds in dwellings. They are fed greens and grain. Before being eaten, they are dipped into boiling water and the fur pulled off, and then cleaned and roasted.

Sheep, llamas, and alpacas are sheared during the rainy season. Sheep are often killed and skinned, and the hides washed before the wool is sheared. Alpacas always, and llamas usually, are sheared with a flat rectangular knife.

Barren female llamas and old or sick alpacas are killed for food, usually by shoving a long needle into the brain or by cutting the back by the spinal column and pinching an artery. Cutting the throat spoils the tough hide of the neck. Otherwise, only animals which die naturally are eaten.

White llamas (and also sheep) are sacrificed on important occasions; llama fetuses serve as offerings. In parts of Bolivia, the llama fetus is produced by abortion. All llamas, alpacas, and vicuñas are thought to be owned by a certain mountain spirit to whom some blood is offered whenever a llama is killed (Perú).

Llama mating is the occasion for a fiesta, with a rite performed by a "white" magician (PAQO), who uses stone llama fetishes. An offering is made, burned, and deposited in a river. Throughout the year, rites are held to increase other species of domestic animals. These rites involve various offerings including libations to the east, the place spirit, and to the stone animal fetishes.

Fishing.—The amount of fishing and the kinds of techniques vary according to proximity of lakes or large rivers. In some regions (marshes of the Bay of Puno), fishing forms the exclusive basis of economy. Although there is no formal prohibition against women fishing, this occupation is actually confined to men. Each community has exclusive fishing rights to that portion of Lake Titicaca adjoining its territory; violation of this right is regarded as trespass. All the fish now known to be living in Lake Titicaca and in its tributary rivers belong either to the family Pygidiidae, genus *Pygidium*, or to the family Orestiidae, genus *Orestias*.

A variety of dragnets and scoop nets are employed. Formerly, these were made of fine, two-ply llama-wool thread. At least one type is of basketry (fig. 45, *center*). Nets are fabricated and mended with a small wooden bobbin and a wooden net gage. Net floats are made of small bundles of totora reed. Sinkers are either disk-shaped stones grooved around the perimeter or flattish, ovoid stones, perforated from both sides. The fish spear has four unbarbed iron (formerly hardwood) points secured to a 10-foot (3 m.) shaft with three-ply cordage of human hair (fig. 44, *e*). Often it is combined with the balsa pole.

In shallow rivers and ponds, fish are taken with the hands. On Lake Titicaca, the hook and line is not used. La Barre reports the former use of a stone hook in Oruro, and Bertonio mentions this technique for his time (La Barre, ms.). The latter also states that fish were taken with a loop, using a worm for bait. Seines, poisons, traps, and weirs are not used. Fish are not killed, but are allowed to die and then strung on a cord with a perforated wooden needle, or on a reed.

Fish are usually taken during the day in the "big net" (fig. 45, *bottom*), which is some 13 feet (4 m.) wide by 26 feet (8 m.) deep and is dragged between two one-man balsas. Men in other small balsas paddle around locating schools of fish. Half of each catch is given to the owner of the net, who divides it equally with his helper, the fisherman who is nearest the net owner when the fish are sighted; the other half is shared equally among the other men, who are potential helpers to the net owner in the next catch.

A second technique also involves two balsas, which stand parallel with the net between them. The net has the same dimensions as that mentioned above with a small opening at the apex for removing the fish. Men in small balsas form a semicircle and drive the fish by tossing pebbles into the water and lashing it with their balsa poles. The division of the catch is the same.

The fish spear is used only during the day in shallow water along the lake edge.

Two types of dip nets (fig. 46) are used in the shallow water of Lake Titicaca or in rivers. One is some 20 inches (50 cm.) in diameter and of equal depth. It is operated from a balsa in shallow water. The second type (3 feet (1 m.) by 20 inches (50 cm.); depth 3 feet (1 m.)) is used when wading in shallow water along the lake's edge.

The *Aymara* prefer to fish on moonless nights, using several types of dragnets. The one-man net has a mouth 4.9 feet (1.5 m.) square and is of equal depth (fig. 45, *top*). It is towed by a one-man balsa, and does not require floats because it has a pole attached to the upper edge of its opening.

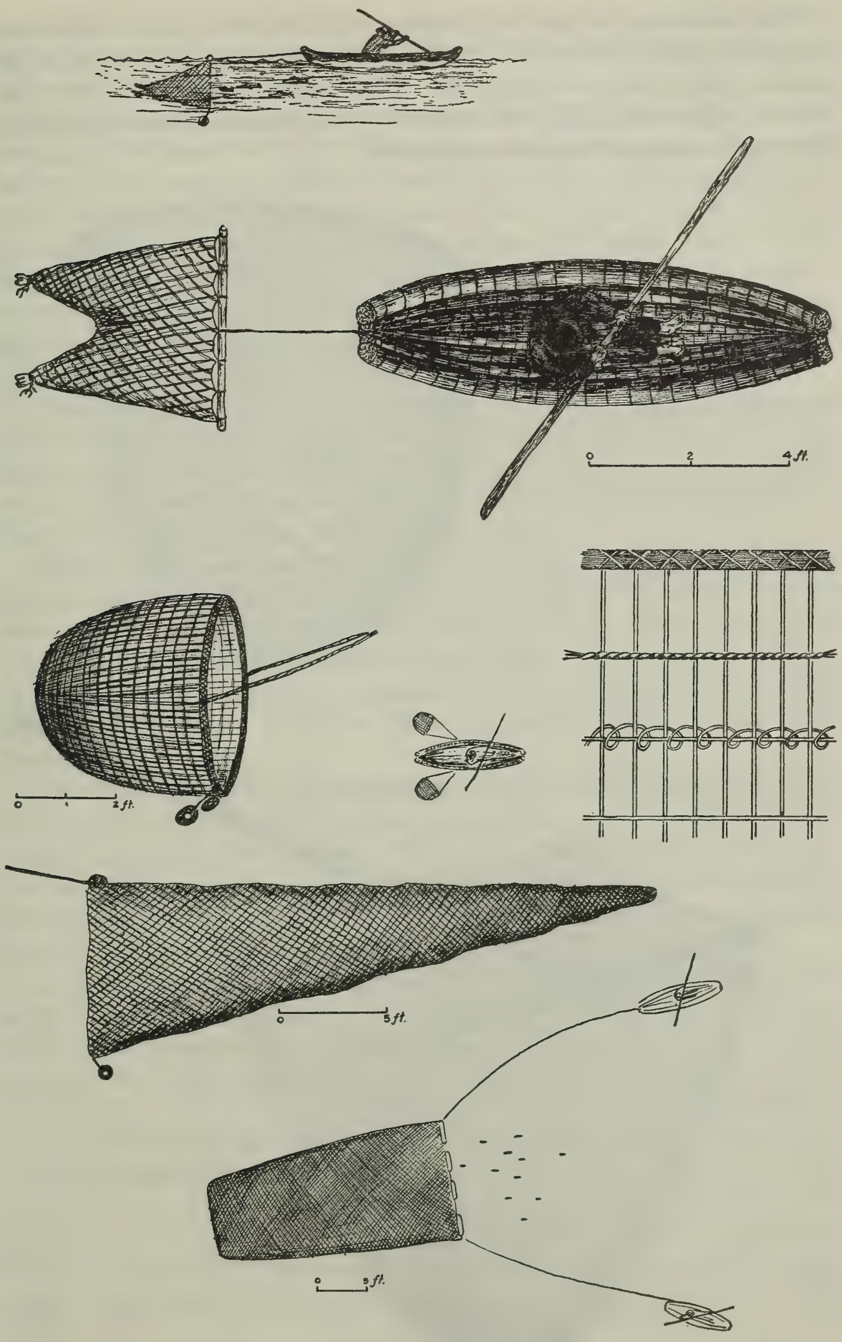
0 2 4 ft.
0 1 2 ft.
0 5 ft.
0 3 ft.

Figure 45.—*Aymara* fishing nets. *Top:* Diagram of single-man net. *Center:* Basketry drag net, Conima, Perú, with detail of net weave at right. *Bottom:* Diagram of "big net."

The basket net is used at Conima and Moho to take a small fish called ISPI, when, from July to December, they lay their eggs in the shallow water of the lake's edge. Each small balsa drags two nets, one on either side (fig. 45, *center*). The nets are some 35 inches (90 cm.) in diameter and of equal depth.

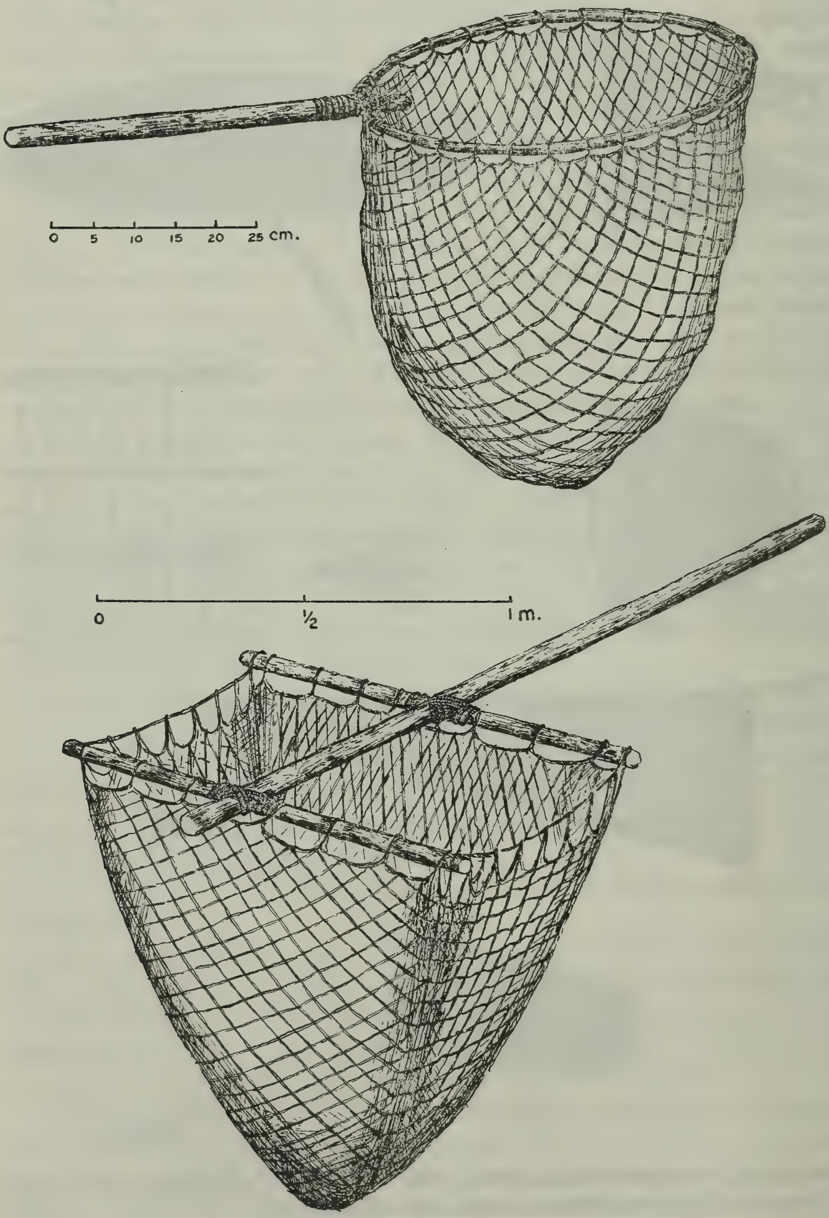
0 5 10 15 20 25 cm.
0 ½ 1 m.

FIGURE 46.—*Aymara* dip nets.

A third type of dragnet is towed at night by two one-man balsas. It has a rectangular mouth, some 4.9 feet (1.5 m.) by 3 feet (1 m.), and is 6 feet (2 m.) long.

Perhaps the most common technique used at night is called "fence" fishing. The fence, which is 3 feet (1 m.) high, is made of single reeds fastened to a length of grass rope anchored to the bottom so that the reeds float upward. It extends some 65 feet (20 m.) perpendicularly from the totora marshes of the lake shore into open water. The fisherman anchors his balsa at the end of the fence and puts out a conical net, 5.7 feet (1.75 m.) in diameter and 4.9 feet (1.5 m.) long, tied into a pole frame (fig. 47, *bottom*). The fences are owned individually and are rebuilt each year (fig. 48).

Flares of dry totora reed or grass are used only with the scoop net (fig. 47, *top*), which is employed during January and February. The fisherman wades in the shallow lagoons near the lake shore or along the banks of the larger rivers. The scoop net is 29.5 inches (75 cm.) in diameter with a handle 4.9 feet (1.5 m.) long.

All the fish are owned by the Lake Spirit (see p. 559), who allows them to be caught provided they are well treated. The bones of the most perfect fish in each catch are burned in the stove with coca, while the fisherman appeals to the Lake Spirit that his luck may continue. La Barre, following Wegner, describes an interesting rite in which fish are offered coca and chicha so that they will become abundant (La Barre, ms.).

During the carnival, the fishermen of each community, headed by their leader, who owes his position to superior knowledge and ability, engage a magician (PAQO; see p. 564) to make a nocturnal sacrifice to the Lake Spirit. He consults coca to find the best hour for the sacrifice, burns the offering, and makes libations in the bottom of an old balsa, after which the balsa is cut adrift.

In the event of trespass by a man from another community, the angry fishermen engage a witch (LAIQA) to spoil the culprit's luck or to cause him to have an accident. His luck may also be spoiled by placing three leaves of coca one over the other, dull side of the leaf uppermost. The trespasser is then named, the Lake Spirit invoked to spoil his luck, and the coca leaves crushed and thrown into the wind.

Food preparation.—The majority of foods—meat or fish cooked with potatoes, chuñu, quinoa, ocas, greens, etc.—are boiled and eaten either as stews or drained and eaten dry. Occasionally, meat and fowl are roasted on spits over coals, and potatoes are roasted in earth ovens. In Bolivia, ovens are rare, owing to the difficulty of getting fuel.

Cheese is made of the milk of cattle or sheep, using Colonial Spanish techniques throughout. Bread is prepared from toasted and ground quinoa (pl. 103, *bottom*) mixed with salt and water. Small pats of dough are steamed on a bed of straw placed over two small sticks crossed inside an olla. Other types of bread are made of quinoa, maize, and barley.

From February to June (in Chucuito), food is abundant; the newly harvested crops and greens, but little meat, are eaten at this time.

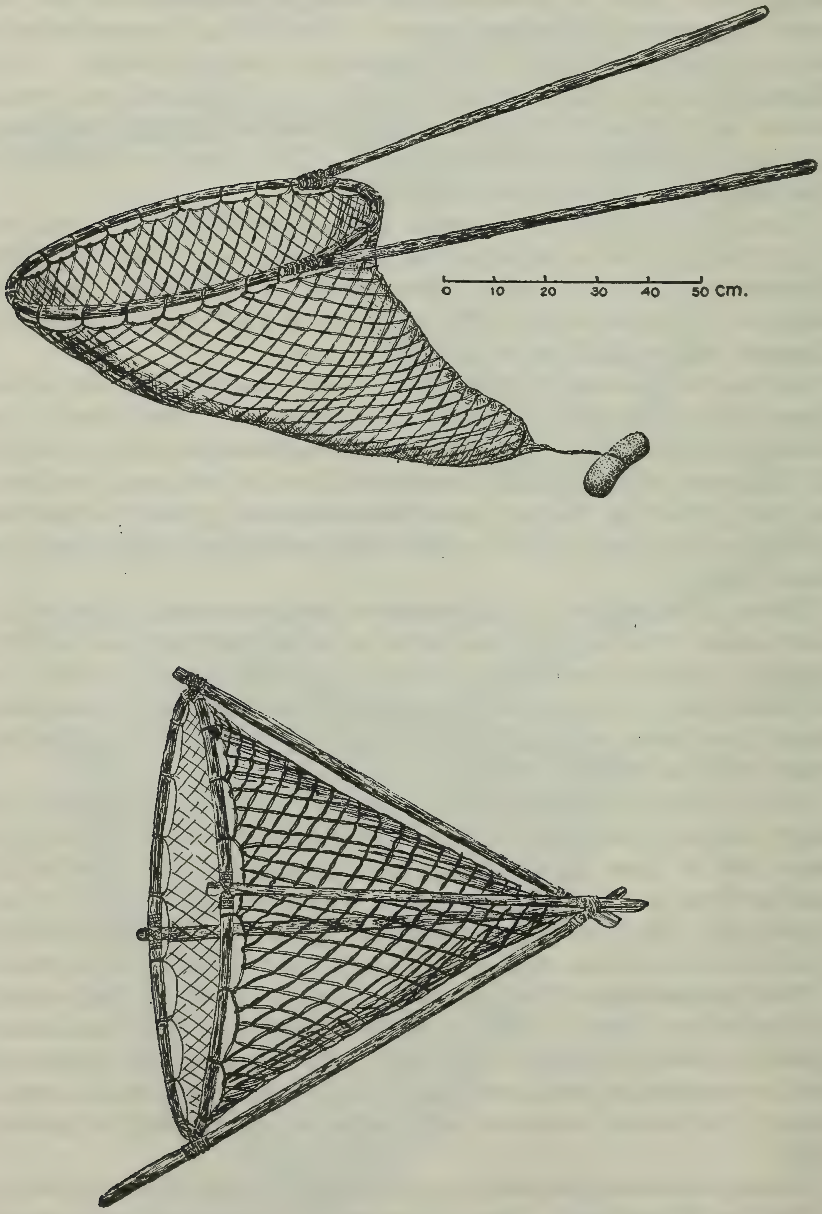

Figure 47.—*Aymara* fishing nets. *Top:* Scoop net. *Bottom:* Detail of net used in fence fishing.

From July to October, the diet consists mainly of grains, the last of the harvest, and stews with meat. From November to January, food is scarce and consists mainly of chuñu, meat, wild birds, and game. Fish are eaten the year round. Literally, every organ of an animal, including the eyes, blood, and tripe, are eaten, although the contents of the stomach and intestines are not utilized.

Only two true meals are eaten each day, one after sunrise, the other just before sunset. Usually, only parched maize or barley is eaten at noon, although during planting or harvesting this meal may be more substantial. Food is served from the cooking pots with wooden ladles into individual pottery bowls. People eat with the fingers or hold the bowl to their lips. During feasts, men and women eat apart.

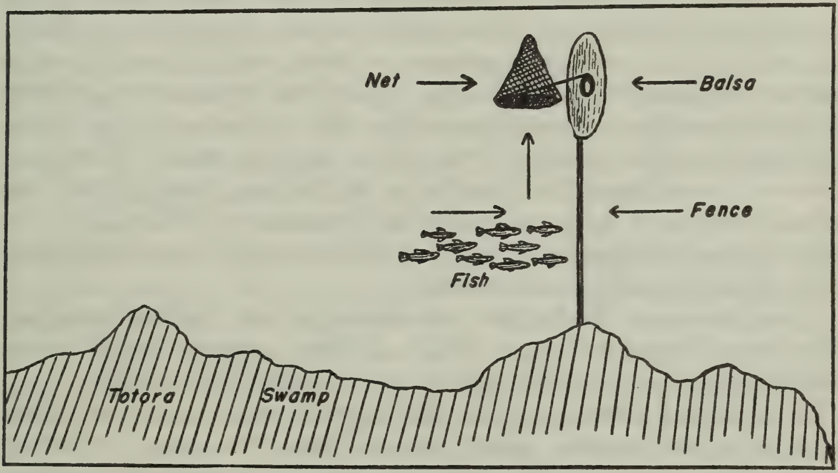

FIGURE 48.—*Aymara* fence fishing.

Food is ground on a large stone metate of irregular outline and slightly concave surface; occasionally the metate is in bedrock. The large lunate stone mano is rocked from side to side. When traveling, a temporary oven is made; a hole is dug on a windy hill and surrounded by a ring of dry manure, one side being open to the prevailing wind. The manure is lighted and an olla set in this ring. To grind condiments, a small stone mortar with a roughly spherical pestle is used.

Small fish are scaled and boiled without being cleaned. To preserve fish, they are split open, cleaned, and dried in the sun on top of stone walls, or are cleaned and roasted between layers of hot stones; this technique is seldom employed in Bolivia. They are never smoked. Meat is cut into strips, salted, and dried in the sun for 10 days.

Many techniques are employed to preserve potatoes and ocas. Chuñu is prepared by allowing potatoes to freeze and thaw on a bed of grass for a varying period depending upon the frost, after which the water is pressed out with the feet and the potatoes are dried and peeled. White chuñu is made from common chuñu by placing it in running water for a month. In parts of Bolivia, potatoes are boiled and dried.

Seed potatoes are stored in crude stone bins lined with straw and an herb (MUÑA) which keeps them from spoiling. Potatoes to be eaten are stored in large, striped sacks of llama wool.

Grain is sacked or stored in large, uncovered cylinders made of totora mats set on rawhides spread out on the floor.

Dried and salted meat is stored in small, roofless, dry-stone houses and is covered by a thick layer of dry grass.

HOUSES AND VILLAGES

Villages.—True town life seems not to have been typical of the majority of the *Aymara*. Although no reliable figures are available, the bulk of the population appears to have lived in family groups scattered in the ayllus of each town. (See Social Organization, p. 539.) At the present time, most *Aymara* live the year round in the ayllus and come into the towns only for fiestas and for trade. There are, however, exceptions: the inhabitants of Kollana (near La Paz) are urban, but go out daily to their fields (Posnansky, 1938, p. 23). In some regions, the *Aymara* live in towns, but occupy houses near their fields during the agricultural season.

Most towns are divided not into ayllus but into localized moieties. (See Social Organization, p. 541.) Kollana appears to be exceptional in that each of its moieties is subdivided into four ayllus.

In aboriginal times, as today, the towns were the ceremonial and administrative centers. According to Cieza, the more important towns of the *Aymara* States were as follows: The State of *Cana* had Cacha, Hatuncana, and Ayaviri; *Colla* had Hatuncolla and Nicasio; *Lupaca* had Chucuito and Juli; *Pacasa* had Guaqui and Chuquiapa; and *Charca* had Chuquisaca (Cieza de León, 1924, pt. 1, chs. 98–106).

There is some evidence that town life was a late development among the *Aymara*. Tradition states that Cari, chief of Chucuito, founded all the known *Lupaca* towns (Acora, Ilave, Juli, Pomata, Zepita) as late as the reign of the *Inca* Emperor Viracocha. Archeological evidence at Chucuito indicates that this important town was built under *Inca* influence if not under actual *Inca* domination (Tschopik, M. H., Inca Uyu, ms.).

Present-day villages are built around one or more plazas in which the markets and fiestas are held. The streets are narrow and lined with walled house compounds. Within these compounds in both the towns and the ayllus, the housing arrangement follows the same general pattern. (See Houses, below.) Little information is available concerning aboriginal town planning. Most towns seem to have had temples of dressed stone as well as special houses for the rulers and priests. In *Inca* times, many contained rest houses and barracks. *Aymara* towns were neither walled nor fortified, although in pre-Spanish times many seem to have had hill fortresses nearby to which the people retreated during wars. The chullpas, or burial towers, were located near the villages, usually on a hill or eminence above the town.

Houses.—House types vary locally, depending in part upon the availability of building materials. Perhaps the most characteristic house is rectangular with a gabled roof (pl. 104, *center*), or, lacking gables, with a "hip roof" (pl. 104, *bottom*). Houses located at the delta of the Río Ramis (Perú) are squarish with walls built of sod blocks and a corbeled domed roof of the same material. (See pl. 110 for comparable houses in Bolivia.) Round houses with conical thatched roofs and rectangular houses are found in the *Aymara* town of Kollana, near La Paz (Posnansky, 1938, p. 23, fig. 36). The round houses have low, dry-masonry foundations and walls of sod blocks. In the totora reed swamps of the Bay of Puno, the *Aymara* live in rectangular tents of reed matting (pl. 104, *top*).

A typical extended family lives in a compound, the walls of which enclose the house clusters of the component biological families; each biological family usually possesses one or two "big houses," a kitchen, corrals, and sheds for the livestock. (See Social Organization, p. 542.) Distinctions based on wealth are shown only by the number and upkeep of the buildings. The dwelling is usually very disorderly, although where there is a separate "big house" for storage, it is likely to be neater. The *Aymara* practically never stay in the houses during the day, and even eat outside.

The rectangular, gabled-roof house is some 12 by 8 feet (3.7 by 2.4 m.) with walls constructed of field stones set in mud, adobe bricks, or sod blocks. Each house is a single room, the rooms being arranged around two or more sides of a patio. The floors of pounded earth are not covered. Houses lack windows and smokeholes and have the doorway oriented characteristically to the east. Doors are made of rawhide stretched on a wooden frame, a poncho curtain, or a piece of solid wood. Lacking a door, the doorway is blocked with stones when the owner is away.

The framework of the roof is made of poles lashed together with wet rawhide or grass rope. Roofs are thatched in various ways with several materials, especially grasses or reeds called totora. The most common thatch, "ichu grass" (*Stipa ichu*), is always used along the pitch of the roof because it is most watertight. If grass is used, totora reed mats are tied over the framework and grass bundles, partially dipped in mud, are laid on like shingles. If mud is not used, the grass is spread out and sewed to the mats with grass rope. With reed thatch, mats are not used, and the bundles are tied in shingle formation directly to the framework.

Kitchens are usually separate (Perú), but may be built against the side wall of the "big house." Some resemble the "big house" in miniature; others are small square rooms with a single-pitched, thatched roof. In Bolivia, the kitchen usually occupies a corner inside the "big house" (La Barre, ms.).

Guardhouses of several kinds are erected in the fields during harvest. Some have a tripod foundation to which shorter poles are tied horizontally and are thatched or mat-covered (pl. 110, *bottom*). Others are square or circular structures of dry masonry or sod blocks with single-pitched or conical thatched roofs.

At the completion of the foundation trench for a new house, offerings are buried in the corners and occasionally animals are sacrificed (pl. 111, *bottom, left*). When the house is ready to be roofed, a magician (PAQO) comes at sunrise to sacrifice a llama to the place spirit. The llama's blood is thrown over the walls and floor and its heart is burned with offerings. The rite is accompanied by feasting, dancing, and riotous drinking.

Household furniture.—*Aymara* houses are sparsely furnished. Low, stone platform beds stand at one or both ends of the "big house." Their origin has uncertain antiquity. A thick totora reed mat serves as a mattress, and llama pelts and woven blankets as bedding. When there is but one "big house," part of the family sleeps in the kitchen which, if small, lacks the platform bed. Niches in the gable ends of the house are used for storage, and possessions are hung on pegs driven into the walls. Light is supplied by a small pottery-bowl lamp with fat for fuel and a rag wick. The "big house" is usually not heated.

Kitchens also have niches and occasionally shelves formed by stones left protruding from the walls. Stoves are of pottery with three holes on top to receive the cooking pots and one in front for fuel and the removal of ashes (pl. 105, *top, right*).

ENGINEERING WORKS

Roads.—At the time of the Spanish Conquest, the Collao was traversed by a network of roads, many of which seem to have existed prior to the period of *Inca* domination. From Cuzco, a road extended southward over the high pass at Vilcanota to Ayaviri. Here it forked, the Umasuyu road passing to the north of Lake Titicaca via the towns of Huancané, Carabuco, and Achacachi to join with the other principal highway in Bolivia, while the Urcosuyu road extended along the southwest shore of the Lake, passing through Hatuncolla, Chucuito, and Juli to Río Desaguadero (Romero, 1928, p. 465).

At Desaguadero, the road crossed the river by means of a bridge, and continued on into the interior of Bolivia via Guaqui, Tiahuanaco, Viacha, and Sicasica to Caracolla (La Barre, ms.). During the *Inca* Period, these highways were served by the familiar system of way stations (tambos) and post-runners.

At the present time, the native roads which traverse the vast Pampa are merely trails. In thickly populated areas, these paths are usually confined between dry-masonry walls and are used as convenient places to dump small stones cleared from the adjacent fields. Where the topography is rugged, crude steps of field stones are built to facilitate travel.

Bridges.—Shallow rivers are usually forded, a rope occasionally being stretched across to help the traveler. On certain bays of Lake Titicaca and across wide rivers, such as the Ramis, travelers and their animals are ferried on balsas. The floating bridge across Río Desaguadero was famous in *Inca* times and existed until late into the 19th century, when it was described by Squier (1877, pp. 256–66). This bridge consisted of a series of balsa pontoons, connected by reed cables anchored at either side of the river to stone bridgeheads. During the *Inca* Period, tolls were collected from travelers (Cieza de León, 1924, p. 324). In pre-Spanish times, swamps and marshy places were traversed by long causeways of stone, the remains of which are found at Sillustani (Bandelier, 1905, pl. 7), Chucuito, and Carpa (Perú).

At the present time, where the lake shore is steep, balsa landings are constructed by building rough stone ramps out into the water. Where the shore is low, canals are dug to permit the craft to approach land.

DRESS AND ORNAMENTS

Clothing.—Although at the time of the Conquest, as today, dress styles seem to have varied locally, both sexes were adequately clothed in garments woven of wool. After reaching puberty, men formerly wore a loincloth (Bandelier, 1910, p. 73) and over it a short, sleeveless tunic secured by a woven belt. For extra protection, they tied a cloak over the left shoulder. A woven coca bag with long straps carried over the shoulder completed the costume.

Women wore an undergarment resembling the men's shirt and a sleeveless outer dress secured at the waist by a broad belt (pl. 105, *bottom, left*). The shoulder flaps were pinned at either side with flat-headed metal pins. A short shawl was worn around the shoulders, pinned in front (Bertonio, 1879 b).

Women characteristically went barefoot, while the men wore llama-hide sandals. In the higher altitudes, single-piece hide slippers, gathered around the edge by a thong, were employed.

For headgear, men wore coiled or woven caps which varied with locality and with rank (Métraux, 1935 a, p. 120). Women wore long head cloths tied on with textile bands, hoodlike caps, or, under *Inca* influence, a hat made of a long textile strip, which was rolled and tied upon the head.

Ornaments.—Metal earplugs or tubes were worn by men of the aristocracy. (See Political Organization, p. 538.) Labrets and nose ornaments seem not to have been used. Broad bracelets of beaten gold, silver, and copper were employed, probably by persons of rank. A wide variety of metal sequins, ear spatulae, and tweezers are found archeologically, most of which seem to have had ornamental value. Few necklaces have been preserved in archeological sites, but Bandelier mentions the use of bone and shell necklaces in parts of modern Bolivia (Bandelier, 1910, p. 75). Rings are worn today, but may not be aboriginal.

Tattooing seems not to have been employed; face painting was probably confined to warriors. Head deformation was practiced (Cieza de León, 1924, p. 314), and pre-Conquest crania from *Aymara* territory suggest that fronto-occipital compression was general.

Hair styles varied locally. In the *Lupaca* area, men and women wore multiple braids. In the La Paz district, men wore a long, plaited pigtail, augmented with false hair (Forbes, 1870, pp. 14–15). Depilation was not practiced.

Modern dress.—Although some features of aboriginal costume survive in remote regions, dress today for both sexes is largely European (pl. 105, *top*, *left*). Men wear homespun suits of archaic cut and long ponchos, while women wear short jackets, full skirts, and many underskirts (Perú); in Bolivia, women wear a longer single skirt (La Barre, ms.). Men wear knitted caps under home-made felt hats; women use a variety of archaic Spanish headgear, although a felt derby of native manufacture is now the vogue. The sandal cut from a rubber tire has largely replaced that made of hide. Among ornaments are metal, spoon-shaped pins and flowers frequently worn on festive occasions.

Age and status are still reflected in dress. Male infants wear white caps; female babies wear red. Small children use wrap-around skirts, which are white or red depending upon sex. Unmarried girls wear a special type of cap and skirt. Young men wear red knitted caps, while old men wear white ones.

TRANSPORTATION

Carrying devices.—No animals are characteristically ridden by the *Aymara*, most travel and transportation being by foot and preferably at night. Women carry their belongings in a wide shawl or in a large, square cloth (AWAYU), which is usually plain for everyday usage and decorated for fiestas. In making up this bundle, two opposite corners of the carrying cloth are folded in toward the middle while the other two pass around the shoulders and are knotted across the chest. Babies are carried on the back in a similar manner. Men carry objects in the AWAYU, in a wide shawl, or in the winnowing cloth, according to their community. They characteristically tie it over the left shoulder and under the right arm, the ends being knotted across the chest, or secure it in the same way as women.

Food carried while traveling is packed in small, striped woolen bags. Coca and other articles are tied up in small, square cloths and deposited inside the large bundle. Ollas are transported on the back by means of a length of llama-wool rope, which passes through the handles. No tumpline is used.

Pack animals.—As the horse has not been adopted to any extent, the chief pack animals are the llama and the donkey. Only male llamas are used; alpacas never. The lead llama of a pack train is the natural leader of the herd, and is not trained. It is usually decorated with especially large ear tassels, and has a bell tied to the wool of its chest. The other llamas become accustomed to the steady tinkle and do not start at strange sounds. On trips, food is not carried for the pack llamas since they find their own fodder along the way. A good llama will carry as much as 100 pounds (45 kg.). The cargo is packed either in a large woolen sack hitched across the animal's back with a woolen rope or in a roughly oval net made of rawhide thongs.

Boats.—Several kinds of craft manufactured from bundles of totora reeds are used to navigate the lakes and rivers of the altiplano (pl. 107, *bottom*). There are two principal types of the small, one-man balsa, one having blunt ends, the other having the bow and stern pointed and slightly recurved (pl. 107, *top*). Each is made of four cigar-shaped bundles of totora reeds, each 8 to 12 feet (2.4 to 3.7 m.) in length, the two larger of which form the bottom. The balsa pole has two pieces of wood lashed to one end with grass cordage to form a short, three-pronged fork. In shallow water, the balsa is poled from a standing position, while in deep water, the pole is operated from a kneeling or sitting position (pl. 107, *top*) as though it were a double paddle.

Balsas equipped with sails are 14 to 20 feet (4.2 to 6.1 m.) in length (pl. 106), and are constructed as described above, except that the two bundles which form the bottom have inner cores of smaller, tightly bound totora reeds to give additional strength. The mast consists of two poles in the form of an inverted V, and has a wooden hook at the top for raising and lowering the sail. A fork-handled sculling oar is placed in an oarlock at the rear to propel the craft in shallow water and during calm weather. Sailing techniques are rudimentary; there is no method of tacking, and the sail is used only when there is a following wind. Sail balsas are supplied with shelters made of reed mats placed over a bent-pole frame. Anchors are large stones either perforated or grooved around the middle. Balsas are anchored with the nose into the wind to prevent water from splashing over the low sides.

MANUFACTURES

Basketry.—Coiled basketry is occasionally manufactured by women. In the regions of Moho and Yunguyo in Perú, coiled baskets are undecorated and are roughly hemispherical. The coils are sewed to a radiating splint foundation on the interior surface. The baskets have a grass-bundle foundation sewed with a fine, three-ply grass braid; they are worked on the exterior surface to the right of the worker.

Shallow wicker trays are manufactured today, but may be of Spanish introduction. Decorated splint trinket baskets are made in the neighborhood of Copacabana, but do not seem to be aboriginal (La Barre, ms.).

Weaving.—Many textiles in local styles are woven by the *Aymara*. Although either sex may weave on the horizontal peg loom, men make bayeta for clothing on a European treadle loom, while belt weaving is usually woman's task.

Cotton and all available types of wool (llama, alpaca, vicuña, sheep) are spun. In parts of Bolivia, yarn for knitting is said to be spun from the down of waterfowl (Forbes, 1870, p. 70). Only very dirty wool is washed, for this knots the fibers. As no technique for carding is known, wool is usually dyed after being spun. A variety of mineral and vegetable dyes are prepared, some with urine as a mordant.

Both sexes spin. The spindle has an unnotched wooden shaft and a wooden whorl which is trapezoidal in cross section or a biconical pottery whorl. A larger spindle is used for multiple-ply thread. The shaft, sometimes with the end resting in a small pottery bowl, is twisted with the fingers; it is not rotated on the thigh.

No broadloom fabrics are made. Wide textiles, such as ponchos and carrying cloths, are made in two halves and sewed together. The loom is horizontal, tied to four short pegs set in the ground (pl. 105, *center, right*). The thick shed stick is of wood or cane; sheds are changed by means of a bar heddle laced to alternate warp threads. The shuttle is a long, thin stick around which the weft is wound lengthwise. After the weft has been shot and drawn tight, a sword is inserted through the shed and pulled down to the edge of the cloth, and the weft is beaten down with a heavy llama-bone awl. As the heddle is pulled up, the web is beaten lightly with the fist to change the shed. When the textile is nearly completed, a strip is woven at the opposite end, and the interval remaining is finished by means of a long, perforated wooden or metal needle.

The loom for belts is also pegged out horizontally. The process of weaving is identical with that described above save that three heddles and two shuttles are used to manipulate the design.

In all textiles made according to aboriginal techniques, the warp is continuous, being wound around the cloth and yard beams. Designs and color changes are set up in the warp threads in such a way that all bands parallel the warp. Designs are characteristically simple: plain stripes and occasionally bands containing diamonds, checks, and zigzags.

A small loom is employed to make fancy edging for carrying cloths.

A wide variety of articles (caps, coin pouches, and scarves) are knitted by women.

Cordage.—Ropes for llama packs are plaited of llama and alpaca wool. Slings are braided in various degrees of elaboration from the same materials. The cradle of the sling is flattened and divided into two parts by a split. One end of the cord is looped to pass around the little finger; the other is knotted and is released when the stone is thrown.

Many kinds of cordage are made from a grass (*Festuca rigescens*), which is soaked in water and beaten with a round wooden club. A two-ply cord is then made by rubbing the grass between the palms. Occasionally, three strands of this cordage are twisted to make a heavy rope used to tether animals. Three-strand braided cord is also manufactured of the same grass, or, occasionally, from human hair.

Matting.—Several types of mats are made from totora reeds. Small bundles of totora reeds are twined together with twisted grass string or are laced onto lengths of grass rope to manufacture mats used to cover house roofs. Heavy laced mats are used as grain storage bins or as bed mattresses. Balsa sails are made of a series of threaded totora reeds, the edges of which are twined with grass cordage.

Skin preparation.—Skins are prepared simply and are never soft-tanned. Fresh hides are pegged out to dry by means of small sticks pounded through their edges. The dry hide is scraped with a knife, and the contents of the animal's stomach worked in with the hands and tramped in with the feet. The cured skin is next scraped with a porous lava rock, then stretched with the hands, and pegged out again to dry. The hair is removed by applying hot ashes and then scraping with a stone. In Bolivia, hides are soaked in salt water and then in limewater for 2 weeks (La Barre, ms.).

Dry hides are used as surfaces on which to grind grain and for transporting manure, fuel, and fish. With the hair removed, hides are cut into strips and made into two-ply rawhide ropes and lassos. Tough hide from the neck of a llama is used for the soles of sandals.

Pottery.—Most potters are men, although women assist and make bowls. Pottery forms include ollas with small strap handles, jugs, chicha jars, basins, parching trays, bowls with characteristic low ring bases, and cups. The cooking stove is also of pottery.

The clay is ground on a metate, mixed with water and sand temper, and kneaded with the feet. To construct an olla, a pat of clay is beaten into a concave disk and placed in a flat pottery support. The walls are built up of concentric fillets of paste rolled out between the palms (pl. 105, *bottom, right*). As the vessel grows, it is scraped with potsherds and smoothed with a damp rag. When completed, it is allowed to dry in the shade, after which it is covered with a slip and is painted.

Pigments are ground with a cobble on a flat stone slab and mixed with water in small bowls. The slip is orange; designs are red and white. Black paint, manufactured in Colonial times, is no longer employed. The slip is patted on with a rag; designs are applied with a brush consisting of a small stick to which hairs from a llama's breast are tied and comprise either simple geometric (cross-hatching, zigzag) or conventionalized naturalistic (birds, fish, plants, stars) figures. After being slipped and painted, the vessels are stone polished.

Pots are fired on a windy hilltop in a ring of dry manure, surrounded by stones. They are inverted, but not supported, and loosely covered with manure during the burning. Grass between the vessels serves as kindling.

Cracked vessels are wrapped with wet rawhide or are perforated and lashed together with cordage.

Gourds.—Although gourds are not grown on the altiplano, a few are obtained by trade from the regions of Cuzco and Cochabamba in Bolivia. Some are incised in a two-color cameo technique (La Barre, ms.). Undecorated gourds, cut in halves, are used occasionally as food vessels, drinking cups, and receptacles for the blood of sacrificed animals.

Woodworking.—Owing to the general lack of trees on the altiplano, woodworking is restricted in distribution. Keros, double vessels, and bowls with oxen carved in the center are used ritually. Large wooden spoons and ladles are employed in preparing food, and small wooden bowls are occasionally used as food containers. Most articles of wood are obtained by trade from the *Quechua*, from the *Aymara* of the more forested regions north of Lake Titicaca, and from Cochabamba.

Mining and metallurgy.—Many of the mines in use today were worked in pre-Spanish times. Gold, silver, copper, and tin were taken from veins with antler picks; gold and silver were also washed from alluvium by means of stone plates (Bandelier, ms.; Forbes, 1870, p. 69). Gold dust was stored in skin bags or in sheep udders.

According to Jiménez de la Espada, the *Aymara* smelted gold in pottery ovens exposed to the wind on hilltops. Gold was cold-hammered or cast as a copper-gold alloy.

Metal objects included semilunate knives with handles, pins with flat heads, tweezers, ear spatulae, bells, and long needles. Metallurgical techniques and analyses from the protohistoric *Aymara* site of Chucuito are described by Tschopik (Tschopik, M. H., Inca Uyu, n. d.).

Stoneworking.—Forbes states on the grounds of semilegendary evidence that formerly building stones were softened with a mixture of herbs and urine, and then cut and polished with equisetum (Forbes, 1870, pp. 66–67). Today stone bowls, small mortars, and spherical pestles are made of a porous basalt. They are first pecked with pieces of hard, compact basalt and quartzite, and then ground with cobbles of porous basalt. Net sinkers are pecked and ground in a similar manner, but the heads of clod crushers are only roughly chipped from field stones. (See Fishing, p. 522. and Farming, p. 515.) Ground and perforated stone spindle whorls were formerly made. The rocker-type mano is employed today with the metate. (See Food Preparation, p. 527.) However, the rectangular mano and flat metate are found archeologically in the protohistoric levels at Chucuito.

Miscellaneous.—Bark cloth seems not to have been manufactured.

During Colonial times, at least, fire was produced by means of flint and steel, pulverized manure serving as tinder. Other techniques of fire making are not remembered.

Glue is manufactured by boiling strips of hide for many hours.

TRADE

Trade is highly developed among the *Aymara*, who use a great deal of magic and divination to assure the success of a trading expedition. Fishing communities exchange fish for animal and vegetable products. Those which specialize in livestock trade wool, meat, and hides for fish and farm produce. In general, each sex barters the articles it produces, although women usually market food products.

Communities also specialize in manufactures, trading pottery, textiles, sandals, and coca lime over large areas. In some regions ayllus tend to specialize in handicrafts. Thus, in Chucuito, two ayllus make pottery, two produce felt hats, and another coca lime. The towns of Yunguyo and Copacabana import cane from the jungle to make musical instruments. In Perú, the *Aymara* obtain such products as ají, maize, fruits, and wooden implements from the *Quechua*. Itinerant shamans (QOḶAWAYU) from Bolivia travel widely, trading herbs, amulets, and medicines. (See p. 478.) *Aymara* from the altiplano make long trading trips to the Lowlands to exchange dried meat, salt, chuñu, and grain for tropical fruits, bamboo, and maize (La Barre, ms.). Formerly, they traded with the people of the Coast for guano, sea shells, and cotton.

Trade is conducted only by barter, the exchange depending upon the relative abundance of the products (grain, potatoes, fish, meat). Overweight (YAPA) is characteristically requested and given by both parties, except where one commodity is an indivisible unit (eggs, pottery, textiles), in which case only the seller of the unit product receives YAPA.

There are fixed market days in the towns and in some ayllus. In the latter, a centrally located spot called "market pampa" is set aside for trading. Women who frequently trade at a certain center have permanent places in the market square. On fiesta days, the markets are larger and more varied.

SOCIAL AND POLITICAL ORGANIZATION

There is little specific information available concerning the social and political organization of the *Aymara* prior to their subjugation by the *Inca*. Presumably, the conquering *Inca* formed an aristocracy together with certain ill-defined local officials mentioned by Bertonio, but it is doubtful whether the bulk of the *Aymara* population was affected to any great degree (Bertonio, 1879 b). In towns, the *Inca* comprised a separate class that was distinguished by dress, special privileges, and, most important, by language, Imported *Quechua*-speaking colonists were settled in *Aymara* territory, and may account for the widespread INKA ayllu.

A few data, principally terms for native officials given by Bertonio, suggest that some type of social stratification existed before the *Inca* conquest of the Collao (Bertonio, 1879 b). That the names of all the rulers of each *Aymara* state are nearly always the same suggests that the chieftainship was hereditary, probably in the male line. (See Documented History, p. 507.) There is a faint suggestion of former dual chiefs who operated respectively in the spheres of peace and war. Conquest Period literature suggests that there was a priesthood and that the priests probably possessed special privileges.

The ruler of each *Aymara* state was distinguished by a number of privileges. Each ayllu reserved certain lands (SUWU) which were farmed communally for his support; in fact, these lands survived well into Republican times, when they were worked to support the Spanish governors. The chief was polygynous, possessed servants, wore special dress and ornaments, was carried about in a litter, and had an exceptionally elaborate household. He was given special burial.

Present-day political organization.—Today, the *Aymara* have no feeling of national unity in spite of a common language and similar customs. The pre-Spanish states have broken down to the extent that the *Aymara* of one village look upon the people of all others as outsiders. This lack of national feeling is manifest by fights during fiestas and frequent arguments among the Indians of adjacent towns over grazing land.

The largest political unit, the district, is administered by a White governor. Districts are divided into comunidades, each of which is under an alcalde and his assistant, the segundo, who are appointed by the Governor and who serve as contact men with the Whites. Each comunidad is divided into ayllus, which are the largest units with which the average *Aymara* has to deal.[8]

The ayllu.—In pre-Hispanic times, the ayllu seems to have been the largest political unit next to the State itself, and was probably utilized then as now chiefly for administrative purposes. In some outlying districts, remote from towns, the ayllu is the community for all practical purposes.

The ayllu is a social and geographical unit and usually bears a descriptive place name. An individual takes the ayllu of his birth, but if he moves permanently to another locality he may change it, or if a woman marries outside her ayllu, she usually joins that of her husband. Although an ayllu occasionally has a myth which claims a common place of origin for its inhabitants, the people do not claim descent from a common ancestor. The early writers are not entirely clear, however, as to whether these origin legends applied to ayllus as a whole or to lineages within them. The ayllu is composed of several unrelated extended families, each of which traces its descent from a separate TUNU, the most remote ancestor in the male line whose name is remembered. Ayllu affiliation does not formally govern marriage, but ayllus tend to be endogamous.

The members of an ayllu have little group feeling, unless the ayllu is very small, and seldom operate as a unit. They tend, however, to resent an outsider who takes up permanent residence and may unite to oust him. Occasionally, they construct a road under the supervision of the headman as they formerly united to cultivate the lands dedicated to his support. Although many ayllus possess common grazing land and although all arable land was formerly common property of the ayllu, there is no communal agriculture. The ayllu as a whole has few important ceremonial functions. The most important fiestas and rites are performed by one or more extended families, age groups, or friendship groups.

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[8] Present-day political organization and Indian administration in Perú and Bolivia differ in detail. Although the ayllu has been abolished theoretically in Bolivia, the modern comunidad corresponds to the aboriginal ayllu unit (La Barre, ms.).

The headman of an ayllu is called HILAQATA. As he holds office for a year, he is often metaphorically referred to as "year father." In Bolivia, in recent times, his term has been limited to 6 months (La Barre, ms.). The HILAQATA is distinguished by special dress or insignia, which varies regionally. Theoretically, the HILAQATA is now chosen by the Governor of his district; actually, he is selected by the people of his ayllu, who discuss the matter informally, after which members of the ayllu council convey their wish to the former HILAQATA, who in turn advises the Governor of the people's choice. He is selected from the age group designated as "mature men." (See Social Status, p. 541.) The new leader is then introduced to the people by his predecessor and ceremonially takes a drink and a pinch of coca with each household head (UTANI) in his ayllu.

The ayllu leaders settle inter-ayllu land disputes and each informally arbitrates intra-ayllu quarrels, many of which never reach the local courts of law. Today, he apprehends criminals and keeps track of the school children and reserve soldiers for the Federal Government. He also takes charge of the systematic crop rotation on the land tracts (AINOQA) of his ayllu, for which he receives a share of the crops. (See Farming, p. 515.) Formerly, he was entitled to a quarter of the produce from the plots reserved for him (the SUWU lands) in compensation for the time spent in the performance of his official duties, the rest of the produce being used to support the ruler of the *Aymara* state. In pre-Spanish times the most important function of the ayllu headman was to be executive of the communally owned ayllu land and supervisor of the division of the land tracts (AINOQA) of his ayllu into family plots (SAYAÑA). Although in Bolivia communal land ownership by the ayllu has been abolished in theory, redistribution of the family plots continues under the supervision of the ayllu leader at the time of Carnival in February or March (La Barre, ms.).

During crises, the ayllu leader sometimes calls a general meeting, which is usually attended by only mature and elderly men.

Each ayllu possesses an informal council composed of public-spirited men and natural leaders (P'EQEÑA), wise and successful men (AMAUTA), and old men respected for their age and knowledge.[9] In Chucuito (Perú), the council is informal to the extent that qualified adults frequently disagree in listing the individuals whom they consider to belong in these categories. The council merely is advisory to the headman. It has no formal meetings, having only informal discussions in the fields or in the house of one of the members.

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[9] Bandelier states that important "sorcerers" were often council members and implies that in parts of southern Bolivia the council may be somewhat more formalized, since a member must have held successively a number of offices (Bandelier, ms.). La Barre found evidence corroborating this (La Barre, ms.).

Moieties.—The function of the moieties in the towns corresponds closely to that of the ayllus in the countryside. Usually, they are designated as MASAYA and ARASAYA, these names being variously translated (Bertonio, 1879 b). Chucuito, perhaps under *Inca* influence, calls its moieties AINAČA and ALAXA MARKA, "lower" and "upper town." Within the town, the moieties are localized geographically; according to Bandelier, they are associated with the north and south (Bandelier, 1910, p. 82).

Perhaps because of the more frequent personal contacts in urban life, a moiety tends to have a greater solidarity than an ayllu. Moiety affiliation depends upon place of birth. During fiestas the moieties compete and intermoiety brawls often result. Although no strict rule forbids moiety exogamy, moieties tend to be endogamous. Today, each moiety has its own cemetery and frequently its own church. Dances within the town tend to be organized somewhat more strongly along moiety lines than is true in the ayllus.

Each moiety possesses an informal council like that of the ayllu and each has its headman, but at the present time the *Aymara* term for the latter is obsolete. Today he is usually designated "Maestro Mayor."

Social status.—In pre-Conquest times, the *Inca* (*Quechua*) formed a social stratum above the *Aymara*, as well as some sort of class stratification, possibly based on heredity, within the *Aymara* group. In addition, slaves taken in war seem to have comprised a "servant class." Whatever the nature of this Conquest Period "aristocracy," class distinctions in modern *Aymara* society are based solely on wealth. (See Farming, p. 514.) Today a wealthy man is respected by the community, and is expected to take an active interest in community affairs. His wealth enables him to acquire prestige by acting as sponsor, "Alférez," in church fiestas, to appear in certain dance groups which require expensive costumes, to entertain more lavishly, and to own a better house and better clothing.

Women, although well treated, are considered inferior. The ayllu and dance group leaders, the practitioners of white and black magic (PAQO and LAIQA), and the doctors (QOḼASIRI) are virtually always men. Men are the musicians, the potters, and often even the best weavers and midwives of the community.

The *Aymara* distinguish several age levels, each with its special occupations, behavior, dress, and name. There is neither formal age-grade organization nor puberty ritual. The ages named are: Male and female infant, boy and girl (occasionally also "little boy" and "little girl"), young man and woman, mature man and woman, and old man and woman. Terms collected by La Barre for Bolivian

Aymara differ slightly, but appear to be of the same general character (La Barre, ms.).

Kinship.—The system of kinship terminology is somewhat obsolete today; personal names are frequently employed, and a number of Spanish relationship terms are used. The Spanish words for "uncle," "aunt," "cousin," "niece," and "nephew" as well as those for "parents-in-law" and "siblings-in-law" have largely replaced native terms. Judging from terms given in Bertonio (1879 b), the *Aymara* kinship system appears to have undergone a marked simplification since early in the 17th century.

Although Bertonio, our only source on the 17th-century kinship terminology of the *Aymara*, does not give a complete list of the terms in use in his time, a preliminary analysis indicates that the following system was employed: Grandparents and their siblings were designated as "grandfather" and "grandmother," the paternal and maternal lines not being differentiated except by the use of modifiers. Great-grandparents were designated "grandfather's father," "grandfather's mother," etc. All grandchildren were designated by a single term to which "boy" or "girl" was prefixed for clarity. Great-grandchildren were designated "grandchildren's children."

A special term classified father with his brothers while another included mother and her sisters. An additional term differentiated a paternal aunt while another was applied to a maternal uncle. Children of classificatory "fathers" were called "sister" or "brother," and their children were designated son or daughter. It is probable that this usage prevailed in the case of classificatory "mothers." Siblings were further differentiated in regard to age relative to the speaker. A special term designated "sister's children," man speaking, while another designated "brother's children," woman speaking. Although Bertonio fails, unfortunately, to give the terms for cross-cousins, their siblings of the opposite sex, and their children, such terms as we have would seem to indicate conditions appropriate to cross-cousin marriage.

Among affinal relatives, father-in-law, mother-in-law, brother-in-law, and sister-in-law were designated by separate terms, woman speaking. A man applied a single term to his parents-in-law and brother-in-law, although he called his sister-in-law by a separate term. Separate terms designated one's brother's wife and sister's husband. The same terms for a son-in-law and daughter-in-law were used by both sexes. A man might refer to all of his wife's relatives by a single term, or to all of her male relatives by another.

The family.—The extended family is the basic unit in *Aymara* society and the most important economic group. It is patrilineal and patrilocal. Its land is usually separated from that of adjacent families by a wall. Ordinarily, within the extended family compound live a man and his brothers, their wives, sons, and unmarried daughters, each conjugal family having its own cluster of houses. When a son marries, he is given land within the family's compound on which to build a house. A married daughter leaves her father's compound, but usually lives in the same ayllu, often nearby.

Domestic authority is invested in the old man and his brothers. The eldest male in the family is theoretically the leader, but vital family affairs are discussed among the male household heads (UTANI), while the women's opinion is usually also sought.

Relatively few family names occur in any ayllu; most are untranslatable, although many refer to natural phenomena such as "cloud," "silver," "hawk," "condor," "puma," "snake," "fire," and "tobacco." Often the locality of an extended family takes its name from the male TUNU in the paternal lineage. The TUNU, the most remote ancestors who are remembered, are traced in both the male and female lines. They are recalled chiefly with reference to proposed marriages and disputes over land ownership. There is no special class of individuals who have the responsibility of remembering these geneologies.

The extended family cooperates as a whole in agriculture, when an elaborate system of reciprocal obligations, called AINI, exists. A man exchanges labor in the fields with his father, paternal uncles, their sons, his brothers, their sons, his own sons, and, today, with his sisters, daughters, and some maternal relatives. He cooperates to a lesser degree with his wife's father and her brothers. A woman's first obligations are to her husband; her own family comes second. Each day that she works for her father-in-law or her brother-in-law cancels a day of her husband's AINI indebtedness to them. Sons and daughters work for their fathers without exchanging labor until marriage. Substitution is possible under the AINI system; a man, if unable to fulfill his obligations, may send a brother or married son in his place, provided he repay this person with the required number of days' work.

The extended family unites to hold certain rites for the benefit of the crops (see Farming, p. 518) and for animal-increase ceremonies. (See Domesticated Animals, p. 520.) The members also act as a unit to counteract the bewitchment of a relative and to apprehend a thief or a murderer. Although blood revenge is now largely obsolete, there are some cases where the members of an extended family have driven an unsuccessful doctor who lost a patient out of the community.

Marriage.—Although polygyny was practiced in pre-Spanish times by certain members of the aristocracy, monogamy seems to have been the rule then and is customary now. No reliable comparative statistics are available for ages at marriage. In Chucuito, both sexes usually marry at about 20 years of age; Cuentas, however, states that, in the vicinity of Juli, women marry at 14 and men at 16 or 18 (Cuentas, 1928).

The ayllu and moiety tend to be endogamous, although not by formal prescription. Of 183 recorded cases of marriages contracted between individuals born in the town of Chucuito (Perú) proper, 89 percent were endogamous within the moiety. Of 26 marriages recorded in QOTA ayllu, which pertains to Chucuito, 85 percent were endogamous. In OXERANA ayllu, which pertains to the town of Ichu (Perú), 20 marriages were recorded of which 90 percent were endogamous. Marriages outside the community or with *Quechua* are disapproved. Of 179 marriages recorded in the town of Chucuito only three *Aymara-Quechua* marriages were discovered. Some informants state that individuals who bear the same family name should not marry, while others maintain that marriage is permissible so long as the individuals do not possess a remembered ancestor (TUNU) in common. Marriage between cousins today is not approved.[10] Twins of the opposite sex are permitted to marry, although attitudes toward such marriages vary; at least three such marriages were recorded for the district of Chucuito. The sororate and levirate occur frequently but are not obligatory, while marriages of several brothers from one family with several sisters of another appear to be common. Marriage between a man and his deceased wife's daughter by another man or between a woman and her deceased husband's son also occurs.

Both sexes live loosely before marriage, no importance being attached to virginity. Love affairs take place early in life, usually while the couple is out tending the livestock. Sex perversions are uncommon today, although male and female homosexuality and bestiality existed in Bertonio's time. Male transvestites are mentioned by several writers (La Barre, ms.; Bandelier, 1910, p. 146). Adultery by a woman was formerly punished by death (Cieza de León, 1924, p. 314); today, an unfaithful wife is usually beaten by her husband and often divorced. A husband's infidelity is mildly disapproved by the public, and occasionally leads to divorce.

Marriages are usually arranged by the young people themselves. The first evidence of interest of a young couple in one another is horseplay, which may become somewhat violent, such as striking each other, throwing stones, etc. To propose, a man steals a garment from the girl; if her parents steal it back, the engagement is off. In western Bolivia, a man may propose by bringing his sweetheart firewood, which she accepts or rejects according to her matrimonial inclinations (La Barre, ms.). Trial marriage is often entered into for an indefinite period before actual marriage (Bandelier, ms.; Romero, 1928, p. 221). It entails no obligations between the families of the couple, being simply designed to ascertain whether the latter are suited to and satisfied with one another.

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[10] Owing to the pressure of field research, the writer was unable to tabulate the frequency with which the various types of marriage occur. The above generalizations are based on the statements of informants.

Much love magic is practiced, either by the interested party or, at his or her instigation, by a practitioner of white (PAQO) or black magic (LAIQA). Charms and spells are used to attract a lover, to repel an unwanted spouse or lover, or to break up a happy union (Paredes, 1936, pp. 76–77, 121–22). Diviners are frequently consulted to find out what type of spouse should be sought or to discover the infidelity of a husband or wife.

When a man has decided to marry, he goes to the girl's parents' house accompanied by his own parents or his older brother who serve as go-betweens. During the negotiations, the prospective bridegroom awaits the verdict outside. The go-betweens present the girl's parents with coca, alcohol, and occasionally food. If these gifts are accepted, the marriage is considered to be arranged. The young man is then called in, in order that he and the bride-to-be may beg forgiveness of her parents. After formally drinking and chewing coca, a day is set for the wedding.

Today, much importance is attached to the Catholic marriage ceremony. The padrino and madrina are usually friends of the groom's or bride's family, but must be unrelated to either. They are chosen for their upright behavior and are supposed to serve the newly married couple as an example throughout life.

After the Catholic service, the bride, groom, and groom's relatives, accompanied by an orchestra of friends with panpipes, proceed to the groom's father's house. The groom's sisters dance before the procession, beckoning to the bride, singing, "This is your road, sister-in-law." At the house, the bride and groom receive their guests under a bower. The bride's parents do not appear the first day, but entertain their relatives at a separate party in their own house. During the first day and half of the second day, the bride and groom receive gifts brought by their friends and the groom's relatives. These gifts entail the obligation to reciprocate (AINI); they must be returned with interest at future weddings. Today, the presents are small amounts of money; formerly, food and fruit were given. After delivering their gifts, the guests receive a drink and go off to dance. Each day's festivities terminate in a feast in which the groom eats with the men and the bride with the women.

On the afternoon of the second day, the bride's parents and relatives (the LARI guests) visit the groom's father's house bringing gifts of produce and livestock. The bride, seated on a blanket and aided by her sisters-in-law, presents food and a drink of alcohol to each guest, while the groom's parents give a llama head to each of the bride's parents. The guests then visit the bride's father's house. The festivities terminate with a party for all who have helped with the cooking and serving, and for the members of the orchestra.

Divorce is easy; 28 divorces (15.6 percent) were encountered among 179 marriages recorded in Chucuito. The wife returns with the younger children to her father's or brother's house; the older children remain with the father. The most common causes of divorce are the wife's infidelity and sterility. If the husband dies, the wife usually remains with his people, especially if she has children. As children are an economic asset, widows with children remarry with ease.

Property and inheritance.—The Peruvian *Aymara*'s property today consists primarily of land, secondarily of personal property; the concept of incorporeal property is not developed. In Bolivia, land is regarded as communal ayllu property. Here a great deal of movable property is destroyed at the death of its owner (La Barre, ms.).

Standing crops and food stores are held jointly by husband and wife. Each person owns his clothes and utensils. Children may not dispose of their property without their parents' consent. It is ordinarily not considered proper for any person to sell a gift without the consent of the giver.

In pre-Spanish times, land was the inalienable communal property of the ayllu and was subject to yearly redistribution among the heads of the families (Cobo, 1892, pp. 248–51). The only land permanently held by families was that on which houses were located. Upon marriage a young man became an UTANI (literally, "with house") and received a share (SAYAÑA) of the ayllu land, which he farmed for a year, retaining full rights to its produce for himself and his family.

In the 16th century, a decree of Viceroy Toledo abolished communal ayllu lands and divided them permanently among the ayllu people (Romero, 1928, p. 22). The Peruvian *Aymara*, possibly because their area was more heavily settled by the Spaniards, accepted this new arrangement. The land was passed down from father to eldest son. Informants say that in former times, the eldest son "had more than his brothers." Women did not own land but were supported by their fathers and brothers. In the regions less populated by the Spaniards, the aboriginal system of land ownership continued, and has persisted in parts of Bolivia to the present day (La Barre, ms.).

Under Peruvian Republican law, women are permitted to own land, and all children today inherit equally, regardless of sex. New Republican concepts that permit land to be bought and sold and allow women to own it have contributed to the break-down of the extended family and ayllu. Today, land frequently passes out of the extended family. The inheritance of land from both father and mother has led to much confusion. A man frequently finds himself unable to work the several widely separated fields which he has inherited and consequently a group of heirs trade their holdings. It is possible that we may attribute to land ownership by women the recent tendency toward bilateralism which is reflected both in behavior and in historical changes in the kinship system.

ETIQUETTE

Greetings and responses are stereotyped to the point where they are untranslatable. A former *Aymara* salutation was to raise both arms upward and forward, the elbows bent (La Barre, ms.). Today, both men and women shake hands, although this practice may not be aboriginal.

"Father" and "mother" are used to address any respected individuals, regardless of relationship. Similarly, aged people are usually addressed as "grandfather" or "grandmother." These terms of respect have been extended also to animals and to supernatural beings; foxes are called "uncle" and spirits "grandfather." White people and Mestizos are usually called WIRAXOČA (Viracocha).

To show deference to an important person or to ask a favor, a whining voice that is almost falsetto is employed by both sexes. Humility was formerly shown by going barefoot and by wearing one's oldest clothes. Spitting is a sign of contempt.

Old people are respected and well treated. Upon entering a house, they are offered a blanket or poncho to sit on, as are guests.

Elaborate ritual surrounds eating, drinking, and coca chewing. In general, people of age and prestige are served first; men take preference over women. At festivals, men and women sit apart and are often served separately. The etiquette surrounding the exchange of coca bags on ceremonial occasions may be considered a rite.

WARFARE

Although the early Spanish historians say much about the incessant wars and raids which the various *Aymara* states waged among themselves and about their eventual conquest by the *Inca*, they are extremely vague concerning the formal organization and techniques of warfare. Presumably, there were war chiefs. The large number, often thousands, of soldiers involved suggests that warfare was organized along ayllu lines (Lewin, 1943, p. 209).

Raids were undertaken chiefly for loot and for slaves. Formal alliances were sometimes made to facilitate raids and especially for protection against the invading *Inca*. The *Lupaca* state, with its capital at Chucuito, is known to have raided as far as Luricache in *Cana* territory. Women seem to have accompanied the troops to carry slingstones for the warriors and to assist in communications (Bandelier, 1910, p. 88). Divination is said by early writers to have been important in all aspects of warfare. In their tactics, the *Aymara* relied chiefly upon surprise attack and ambush. Strategic hilltops near the towns had fortifications (PUKARA), some with temporary living accommodations for many people. In case of sudden attack, the troops were summoned by means of simple smoke signals, fires on mountain peaks, and trumpets. Warriors painted their faces both to terrify the enemy and to effect magic.

To arrange peace, envoys discussed terms in neutral territory. In case of surrender, the leaders of the losing side presented themselves to the victors in their oldest clothes and barefoot, their hands tied behind their backs.

In recent *Aymara* revolts in both Perú and Bolivia, prisoners were tortured. There is, however, no evidence that this practice is ancient. Captives were roasted and eaten in the field (Bandelier, ms.); occasionally, the blood of enemies slain in battle was drunk. Apparently, the motive for this cannibalism was to take revenge and to gain the valor of the victim. Puma blood is occasionally drunk for the same reasons.

In warfare, the *Aymara* fought with slings, stone-headed clubs, and bolas. Although the bow and arrow was known, there is no archeological evidence that it was ever an important weapon. La Barre states that a lance was occasionally used, and, following Tschudi (1869), says that warriors employed a light shield that covered most of the body (La Barre, ms.).

LIFE CYCLE

Childbirth.—Children are greatly desired and are well treated; they rarely receive physical punishment. Birth control techniques are not practiced; the high infant mortality limits families. Of a total of 155 children born to 30 typical families in Chucuito, 14 percent died before reaching the age of 6 months; 25 percent before 3 years; 34 percent before the age of 13. The average number of children for 150 biological families in Chucuito is 2.5. Infanticide is not approved, but deformed babies are allowed to die. Although disapproved, abortion is occasionally practiced by unmarried women, who drink a strongly laxative tea or roll a heavy stone on the abdomen.

Twins are considered by the Peruvian *Aymara* to be fortunate. In the La Paz area, Paredes states, they were thought to cause a bad year and one was killed, sometimes by being buried alive (Paredes, 1936, p. 91).

Pregnancy is recognized by the cessation of menstruation. Although not subject to food restrictions, the expectant mother must avoid looking at corpses and dead animals lest the child become sick. If the mother visits cemeteries, particularly ancient burials, or handles human bones, the child will be deformed. The sex of the unborn child is ascertained by the interpretation of dreams and by coca divination. (See Religion, p. 563.) The day of birth determines the success of a child throughout life. Magic is used to produce a child of the sex desired. Offerings are made to a native shrine and (in Bolivia) farm implements placed under the bed to produce a boy, or cooking utensils to produce a girl (La Barre, ms.).

Birth takes place in the main house. Usually, the mother is assisted by female relatives or by professional midwives, who are old persons of either sex. The midwife is paid for his or her services and receives an extra fee for disposing of the afterbirth. The husband may be present and may assist, No traces of the couvade exist. When birth is imminent, glowing coals are passed around the house to prevent the child from becoming sick, and a knife is stuck into the floor near the door to facilitate delivery and to protect mother and child from evil spirits. The midwife massages the woman and tumbles her in a blanket to put the baby in the proper position to be born. If the birth is difficult, a medicine is administered to speed it, although nothing is given to relieve labor pains.

A woman delivers in a crouching position, supported by her husband or a female relative. She does not remove her clothes. When the child begins to come, her belt is tightened just above the abdomen. The umbilical cord is cut with an obsidian blade and tied with cotton twine. It is supported by a string passing around the child's neck, and a cotton pad is placed over the navel. If the baby does not breathe at once, the midwife breathes down its throat. The child is washed either by the midwife or by a relative on the first day considered propitious for this operation. If a belt twisted tightly about the mother fails to expel the placenta, the midwife pulls it out. The mother is then rubbed with herbs to prevent her catching cold.

The placenta receives special treatment. The midwife floats a piece of it in a basin of water to divine by its movements the child's future. In the La Paz area, the placenta is covered with flowers and buried in the shade, accompanied by miniature farm implements if the child is a boy or cooking utensils if it is a girl (Paredes, 1936, p. 114). The Peruvian *Aymara* place it inside two new pottery bowls and burn it, either keeping the ashes as a medicine or burying them in a shady spot. After handling the placenta, which is considered dangerous and is thought to injure the hands and eyes, the hands must be rubbed with llama fat and red ocher.

The mother is confined to the house for a week after birth, during which her diet is restricted, salt and ají being prohibited (Perú); in Bolivia, women are said not to be confined after childbirth. During confinement, the mother's feces and urine and those of the child are deposited in a hole in the floor of the house near the door, because it is thought that throwing them outside in the sun would make the infant ill. At the end of the week, the blankets and other objects contaminated by the birth are washed and the water poured into the hole, which is then filled in. Before the mother mingles again with other people, her clothes and house are disinfected with the smoke of certain herbs. She may not wash with water for a month, at the end of which she must wash her hair and hands with an infusion of special herbs.

Today Christian names are employed universally. In Bolivia, according to Radin (following Bandelier), children are often named after magicians, doctors, or wealthy individuals (Radin, 1942, p. 279).

Children are usually nursed for 2 years. In Chucuito, the child is first put to breast from 6 to 12 hours after birth. Nursing intervals are irregular, in theory depending upon when the child cries and in practice upon how occupied the mother is. Infants are continually with the mother during the nursing period, and are taken to the fields, to market, and to fiestas. When the child is a year and a half old, it is given mashed boiled potato after it has nursed, and is gradually fed more solid food.

Although cradles are not employed, babies are tightly bound with a belt until the age of 8 or 9 months, and are carried about slung in a cloth on the mother's back. Old rags wound about the infant beneath the binding belt serve as diapers, and these are changed in theory when the mother notices that they have become soiled, in practice about two or three times daily. Children are usually bathed 4 days a week, the other 3 being considered unlucky. Since children sleep in the same bed as their parents until they are able to walk and talk, and often until the age of 5 or 6, they become familiar with adult sexuality at an early age.

Formerly, all children born during the preceding year were brought into the plaza at the beginning of the annual potato harvest for a rite called SUKUḼU, at which time their faces were anointed with vicuña blood. Little boys were anointed by their paternal uncles, little girls by their paternal aunts. The children were then presented with a kind of wrap-around skirt decorated according to sex (Bertonio, 1879 b). Small children today wear such skirts.

At about 2 years, a child's hair is cut for the first time in a special rite. This should not be done at too early an age, lest the child be unable to walk and talk. Inadequate statistics from Chucuito indicate that male *Aymara* infants (5 cases) speak their words at 12.6 months and walk at 16.8 months, while female infants (5 cases) first speak at 11.6 months and walk at 16.7 months.

Because a small child is thought to be particularly liable to lose his soul, a small bag containing salt, ají, and a knife to ward off evil spirits is hung around his neck.

Puberty.—Puberty receives no formal social recognition today in *Aymara* society, nor is there any indication in the Conquest Period literature that puberty rites were important in the past. That full adult status is achieved at the time of marriage is indicated by the verb "to marry," which means literally, "to become a person."

There is a slight fear of menstrual blood, and, although women are not segregated during their monthly period, it is believed that intercourse should be avoided at these times. Menstruating women should not work in the fields, since their organs at this time are thought to absorb the earth's fertility. Similarly, they should not handle agricultural implements. Menstrual pads are not used.

Death.—Omens and divinatory techniques are important in the event of a death. When a person is gravely ill, a diviner (YATIRI—see Religion, p. 563) is paid to ascertain whether he will recover, and a doctor (QOḼASIRI—see Curing, p. 569) is engaged to divine whether the medical treatment being used is effective. The dying person is made as comfortable as possible and his relatives summoned. When death occurs, all present wail loudly. Formerly, a dying person was strangled so as to release his soul and prevent the return of his ghost (Forbes, 1870, p. 39; Paredes, 1936, p. 217); today a rope is tied around the corpse's neck immediately after death. The mourners (HAČ'IRA), who include only the immediate relatives of the deceased, don black clothes and hoods, while friends and more remote relatives prepare the corpse for burial. Bertonio mentions this practice, and adds that these relatives had to abstain from salt and ají (Bertonio, 1879 b).

The night following the death, a wake is held in the deceased's house. All present drink, chew coca, and extol the virtues of the deceased during his life, stressing his role as an economic supporter of the family. A llama is tethered, the rope placed in the corpse's hand, and the animal sacrificed to accompany the deceased to the next world.

Burial today is in cemeteries which, in more remote regions, are located at crossroads.[11] The corpse is carried on a litter, followed by the mourners, friends, and relatives. The women wail in a stylized falsetto, while morbid jokes are made about the deceased, who is blamed for dying. The mourners stress the economic loss of the family which the deceased has caused by dying. Bowls of food, jugs of water, and a grass broom are placed with the corpse, then everyone throws earth into the grave. Young children and ailing persons are made to jump over the grave so that the ghost sickness will depart with the deceased.

After the funeral everyone turns his outer clothing wrong side out, washes his mouth and hands, and returns to the house of the dead person by a new route to avoid misfortune and to prevent the ghost from following them. A feast follows, which is accompanied by the usual drinking and coca chewing and in some regions by dancing. In Bolivia, around Guaqui, the deceased's clothes and an offering of food are burned after the funeral; in Ulloma, in addition to burned offerings, the dead man's dog and the llama which carried his clothes to the pyre are killed (La Barre, ms.).

The mourners may not wash their hair during the following week. After 8 days, the dead person's clothes are washed in a river, stuffed into a crude effigy of himself, and placed in his house. The mourners and their assistants purify themselves, the house, and the deceased's clothing in the smoke of herbs and ají. Then the house is ritually cleansed by an old man or woman who is not a family member or, sometimes, by a magician (PAQO), after which there is more feasting and dancing.

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[11] Bandelier states that formerly the dead were interred in abandoned houses or under the floor of occupied houses (Bandelier, ms.).

Mourning lasts a year, during which remarriage is prohibited. The house is not abandoned after death, nor the name of the deceased tabooed. While mourning, the widow or widower should behave in an exemplary manner and show no interest in the opposite sex.

After a year, a mourning anniversary is held. Today it coincides with the fiesta of Todos Santos. Mourning dress is resumed and food offerings made to the deceased. Among the Peruvian *Aymara*, this rite is observed for three successive years, after which the soul of the deceased is said never to return to earth.

Stillborn infants or miscarried or aborted fetuses are not buried but are burned or thrown into Lake Titicaca or into a river. Small children and babies receive a special and less elaborate funeral than adults, wherein mourning clothes are not worn nor animals sacrificed. The bodies are interred at night with miniature offerings. Children's funerals are not considered sad but are followed by feasting, drinking, and dancing.

Unusual deaths entail special treatment. The corpses of women who die in childbirth, witches (LAIQA), and suicides are buried face down. The souls of drowned men are thought to wander forever along rivers.

Soul concepts are confused. The soul and ghost are not clearly differentiated, although in general the ghost is feared while the soul is not. The soul may leave the body of a living person and be lost or kidnaped. It survives after death when the deceased is furnished a llama to serve him as pack animal. Aboriginal beliefs about the afterworld have not survived. It is thought that the soul returns to its former habitat from time to time to protect its living relatives or to punish them if they merit it (Paredes, 1936, pp. 211–12). Ghosts are feared and may appear to the living as corpses or dogs. Desiccated human flesh from old graves is sometimes eaten when prescribed by a doctor (QOL̂ASIRI) as a prophylactic against ghosts and sickness caused by ghosts.

The *Aymara* formerly interred at least their chiefs and important persons in chullpas. These burial towers, which were usually located on hills near the towns, were square or round, made of dressed stone or of stone and adobe, and variously roofed. (See Archeology, p. 505.)

Cieza describes the burial of a chief which he observed in the *Colla* town of Nicasio (Cieza de León, 1924, pp. 315–18). The relatives of the deceased assembled, bringing all kinds of food, while many llamas were killed and quantities of maize chicha prepared. If the deceased were important, most of the inhabitants of the town accompanied the corpse to the tomb, where they killed some of his wives and children and sacrificed many llamas. The sacrificed relatives, together with some of the llamas and the deceased's possessions were placed with the corpse in the tomb. Other persons were buried alive. After the funeral everyone returned to the deceased's house, where they feasted and drank for several days, the women wailing constantly. All danced mournfully from time to time. The wives who survived the funeral paraded weeping through the town, carrying weapons, clothing, and other possessions of the dead chief and singing of his deeds. The women and servants then cut their hair, wore only their oldest clothes, and neglected their personal appearance. For several days no fire was lighted in the deceased's house. Mourning lasted for a year, at the end of which a second rite, involving libations and the sacrifice of additional llamas, was performed at the tomb.

ESTHETIC AND RECREATIONAL ACTIVITIES

Art.—Artistic impulses today are expressed chiefly in textiles (see Weaving, p. 534) and in dance costumes (see Dances, p. 554). Present-day *Aymara* culture is extremely utilitarian and lacks other formal art styles.

The archeology of Chucuito has revealed a highly decorated and varied pottery style that persisted well into the Colonial Period (Tschopik, M. H., Inca Uyu, n. d.). Vessels, chiefly bowls, were painted with animal, plant, bird, fish, human, and geometric motives in several colors. Large ollas had chiefly floral, but occasionally zoomorphic, designs.

Games.—The few games are confined principally to children. Gambling is unimportant, although small boys occasionally bet portions of their lunches while herding livestock. Girls and boys imitate such activities of their elders as marketing, trading, housekeeping, and dancing. Girls play with stuffed rag dolls and learn to care for children in this way.

Boys play with wooden tops and baked clay marbles, although these games may not be aboriginal. The bull-roarer is a child's toy. Children make cat's cradles, the figures having such names as "seven eyes," "star," and "spider." The figures are made by single individviduals; the feet are not used. Guessing games include the "shell game" and guessing how many corn kernels or pebbles a person has hidden in his hand. Boys compete to see how far they can throw stones with slings. They flip ground-potsherd or baked-clay game pieces at a shallow pit dug in the ground, the winner requiring the fewest flips to reach the hole.

Children or young people of the same sex have informal foot races. Relay races are not run. Girls and boys wrestle, although without special rules.

The chief adult game is riddles, two individuals or teams competing. A person unable to guess the answer is made to perform some ridiculous act as a penalty. At Callapa and Calacota (Bolivia), the two moieties have wrestling contests in which contestants try to throw or push their opponents outside a ring drawn on the ground (La Barre, ms.).

Dances.—More has been published on dances than perhaps any other aspect of *Aymara* culture. La Barre describes and summarizes important dances of the Bolivian *Aymara* and presents a bibliography (La Barre, ms.). Nearly all Church fiestas, weddings, funerals, rites for a new house, harvest, and the mating and shearing of llamas are occasions for dancing. With the exception of the fertility ceremonial (čoqela) held after harvest and the rain ceremony, dancing today seems to be recreational (pl. 108, *top*). Although specific data are lacking, it is probable that important pre-Spanish public fiestas were fixed according to the agricultural calendar as among the *Inca*. Cieza mentions an important festival at the potato harvest; today, agriculture continues to be one of the chief focal points of ceremonial activity. Dancing is invariably accompanied by instrumental music and by drinking.

At the present time, dance costumes and paraphernalia are largely of Mestizo origin. Costumes are often of velvet decorated with metal threads, braid, mirrors, and glass beads. The masks commonly worn by clowns and "devils" are probably of Spanish origin. They are usually manufactured of plaster. Some aboriginal features in present-day dance paraphernalia seem to lack any esoteric significance. Among them may be mentioned fox and vicuña skins, jaguar kilts or shoulder ponchos, slings, and colored yarn tassels carried in the hand. In the fertility ceremonial (čoqela) (pl. 112), fur masks are worn which are said by some to represent spirits. These are not kept secret from the women and children. (See Religion, p. 567.) Feather dance diadems are mentioned by Bertonio (1879 b), and feather accessories to various dance costumes are in common use today. One dance (p'uli) involves wings made of green parrot feathers sewed on cloth. Such featherwork is obtained by trade from the jungle. In general, feathers are not used in ceremonialism and have no ritual significance.

The dance groups seem to perform no esoteric rites. Bandelier states that they possessed differentiated functions such as hunting, rain making, war, and others (Bandelier, 1910, p. 123), but the Peruvian *Aymara* give no evidence for such an assumption.

Dance groups are organized primarily along friendship and family lines, and secondarily, by moieties or ayllus. In Chucuito, these friendship groups, the members of which dance together during fiestas, are composed of individuals of similar economic and social backgrounds. Some groups are composed of poor young men who speak almost no Spanish; the members of other cliques, most of whom have been educated at Catholic schools, are the scions of the wealthy and prominent Indian families. Among the Peruvian *Aymara*, each group has two leaders (IRPA) who organize and supervise it for 3 successive years. In western Bolivia, every man is expected to lead in some dance, his authority lasting until the dance is finished, when he is feasted by his group (Bandelier, ms.). Age grading enters informally into the composition of dance groups, some being restricted to older people and others to younger men and women. In one dance, held by unmarried people, the girls ask the boys to dance.

There are a great many types of dances, all of which vary from one community to the next. Some are restricted to men, who play panpipes while trotting slowly in a circle and swaying their shoulders in time to the music. In the fertility ceremonial (ČOQELA), which is said by some to imitate the *Aymara* of the high pampa regions and by others to imitate mountain spirits, a line of women perform a posture dance, while men circle around them playing end-flutes. The Č'UNČ'U (chuncho) dance is done by men and women who form lines and dance in unison (pl. 108, *bottom*). They imitate jungle Indians, wearing feather headdresses and carrying bows and arrows. There are many circle dances performed by both sexes, the more common of these today probably being of Spanish origin (pl. 108, *top*). In the large fiestas of the towns, the dance groups progress around the plaza, halting to perform at each corner and occasionally at each side. P‘ULI dancers imitate birds; others burlesque the Spaniards. Bandelier mentions a dance in which impersonators of the *Inca* Emperors, Huascar and Atahuallpa, are carried on litters during a mock battle fought with slings (Bandelier, 1910, p. 115).

Music and musical instruments.—Music is one of the chief esthetic interests of the *Aymara*, and musical styles are well developed. Most music is secular. It is used in all festivals and in some ceremonies. It is almost invariably accompanied by dancing and drinking.

Musical instruments are played only by men, usually in troupes rather than individually. These troupes generally consist of relatives or friends, but occasionally are ayllu or moiety members. (See Dances, p. 554.)

Most music is instrumental, songs being relatively unimportant. Many songs are romantic love songs, sung to the accompaniment of a small mandolin made of a dry armadillo hide. It is probable that both these songs and the instrument are of Spanish origin. Choral singing by women of the song describing the ritual hunting of the vicuña is an important element of the fertility ceremony (ČOQELA).

(See Religion, p. 567.) A mixed chorus of men and women participates in the rain-making rite in which the frog ritual occurs. Cieza states that long narrative songs dealing with traditional history were sung at the time of the Conquest.

A variety of musical instruments are employed; the most common are end-flutes and panpipes. The pentatonic scale seems to be used exclusively. End-flutes have five or six stops, depending upon locality, and are adapted to the melody required for a specific dance. They are usually made of cane, are notched at the upper edge, and are held vertically when played. Another type is a duct flute made of a wooden tube which is supplied with a separate mouthpiece and is also blown vertically.

Panpipes consist of single or double files of cane tubes bound together by pieces of split cane. The tubes are closed below and graduated in size and length. Panpipes are usually played by troupes of men, often as many as 20. The instruments are of several sizes to give the complete range of notes necessary for a given melody. If the number of men in the troupe is small, two sets of pipes are held together, one pitched a 5-note interval higher than the other, resulting, when all are played together, in pseudoharmony.

Trumpets, blown to frighten away hail, are now of cow's horn. They are never of conch shell, but are said formerly to have been of wood.

Drums are shallow, wooden cylinders with double rawhide heads bound by rawhide thongs. Only the upper membrane is beaten, the lower being braced by a transverse rawhide thong to which short sticks are tied. As the drum is beaten, these rattle against the lower membrane. The drumstick is a short pole with a stuffed rawhide head. Bandelier mentions the tambourine (1910, p. 112), which may be that illustrated by Squier (1877, p. 306).

A notched cane rasp without resonator is used in western Bolivia. Dancers occasionally have small, spherical, copper rattles sewed to their costumes.

Narcotics.—Coca (*Erythroxylon coca*) is chewed with lime by all adult *Aymara*. Smoking may be aboriginal, as wild tobacco is occasionally used medicinally and tobacco smoke is offered in some rituals. Coca was formerly obtained by trade from the jungles of Perú and Bolivia, but is now usually purchased in stores. The leaves are chewed daily with lime to alleviate fatigue and to dull the appetite while working or traveling. It is taken on all festive and ritual occasions, when it is considered to promote good will, and is invariably part of every ceremonial offering, either the dry leaves or the chewed quid being used. Coca is also used as a medicine and as a means of divination.

Men carry coca in small woven bags or occasionally in skin pouches. Women fold and tie it in a small square cloth.

Lime chewed with coca is prepared from KAÑAWA stalks, the bark of the QENUA tree, or from woody cactus fiber, the plant being burned and the ashes ground and made into a paste which is molded into cakes and dried in the sun. It may also be pulverized and kept in a small gourd (Squier, 1877, p. 302).

Intoxicants.—Although commercially distilled liquors are drunk today, various forms of fermented chicha formed the aboriginal intoxicants. Drinking is more than purely recreational; it is considered necessary at all festivals and ceremonies. Chicha and other intoxicating beverages are used for libations in virtually all ritual offerings. Alcohol is also used medicinally. Intoxicating drinks are used by adults of both sexes and occasionally in small quantity by children, because some rites require that all participants drink. Heavy drinking for both sexes begins at puberty or soon thereafter.

Chicha is made by women of quinoa, maize, or barley. It is drunk fresh or fermented. The grain is dried, ground into flour, and divided into two portions. One part is chewed, deposited in a basin, and later mixed with the dry flour. Usually, young girls whose teeth are not stained by coca chew the grain. The dough is placed in a large, open-mouth chicha jar with warm water and stirred with the arm. The mixture is boiled and allowed to settle, after which it is decanted into a second jar with a constricted neck. The liquid is allowed to ferment for 2 or more days.

In southwestern Bolivia, a fermented drink is made from green maize stalks (Forbes, 1870, p. 57).

RELIGION AND CURING

The formal priesthoods and temple cults were eliminated early in Colonial times through the energetic activities of the Spanish missionaries and settlers; however, the "personal" religion of the *Aymara* has survived to the present day as a coherent body of beliefs and practices. Several aboriginal public ceremonials are still performed in addition to Church fiestas, but the majority of native rites are of a personal or family nature. Today, no specific cults of any supernaturals survive.

It is difficult to discuss the "religion," "magic," "witchcraft," and "medicine" of the *Aymara* as discrete entities, since these arbitrary categories are all closely related aspects of one central subject: the *Aymara's* conceptualization of and ways of dealing with the supernatural. Nor are the spheres of activity of the practitioners of magic clearly defined; the powers to cure disease, divine the future, and manipulate the spirit world are shared by several classes of specialists.

This sharing of powers among different categories of magical practitioners has led to a certain terminological confusion on the part of the *Aymara* themselves; a given individual will be designated a "diviner" (YATIRI) when he is being considered in this role, and later as a "doctor" (QOLASIRI). A particular "magician" (PAQO) will also be called at times "witch" (LAIQA) or again "diviner" (YATIRI). In general, in their approach to the supernatural, *Aymara* practitioners of magic belong rather to a "priestly" than to a "shamanistic" tradition.

Temple cult.—The early Spanish conquerors of the Collao said little about the content and organization of formal *Aymara* religion. Their brief descriptions of practices of that period seem to indicate that *Aymara* state religion was strongly colored by *Inca* beliefs, if not of *Inca* origin. In addition, archeology confirms native tradition that many temples in *Aymara* territory were erected as late as the period of *Inca* domination.

The *Cana* and *Colla* possessed temples dedicated to the creator god, Viracocha, who was thought to live in the sky. A *Cana* temple is said to have contained a quantity of gold and a stone statue the size of a man. Other temples, dedicated to the sun, were built by the *Inca* at Hatuncolla and on the Island of the Sun. These were served by priests and Chosen Women. On top of a high hill near Ilave, in *Lupaca* territory, stood a monolithic statue facing east. It was carved with a man on one side, a women on the other, and with frogs and snakes all over. Other monoliths adorned with frogs, snakes, and lizards were encountered by Squier at Hatuncolla (Squier, 1877, pp. 385–86). In their ceremonies, the *Aymara* are said to have made offerings of llamas and vegetables. Only male animals were sacrificed, the color and the quality of the animal depending on the deity for which the sacrifice was intended. Human sacrifice seems to have been rare, although children were occasionally sacrificed on important occasions. The victims are said to have been strangled (Morúa, 1922–25, p. 239).

The most common religious practices, however, formerly as now, seem to have been connected with a series of "nature spirits." Garcilaso states that the *Aymara* worshiped such natural phenomena as rocks, lakes, and caves. According to Cieza, they possessed temples or "guacas," each with an "oracle," in unpopulated and remote regions (Cieza de León, 1924, p. 315). Morúa speaks of sacrifices at shrines and cairns which are virtually identical with those performed today (Morúa, 1922–25, pp. 236–38).

Supernatural beings.—To the *Aymara*, the world is so densely populated with supernatural beings that it is literally impossible to enumerate them. They exist almost everywhere in nature and vary from vaguely defined "powers" to clearly personified supernatural beings. Although the majority are ambivalent in their attitude toward human beings, depending upon how they are treated and upon who manipulates them, some are always malevolent and others benevolent.

All unusual natural phenomena, whether inhabited by good or evil spirits, are called WAK'A. Although this word is usually employed for oddly shaped stones, which are frequently anthropomorphic, and for mountain peaks, meteorites, places struck by lightning, and the like, La Barre states that it also applies to such things as twins, persons with a harelip, and those born feet first (La Barre, ms.). In general, spirits which are not definitely malevolent are called grandfather (AČAČILA), while evil spirits and demons are called AUKʿA or SUPAYA, words which also are used for the "devil" of Christian belief. As animals and plants are thought to be "owned" by a higher order of supernatural beings, there is a general lack of plant and animal spirits.

The most important class of supernatural beings consists of the several types of place spirits, which are ranked in a hierarchy depending upon their powers for good or evil and upon their intelligence. In the opinion of informants, the house guardians (UIWIRI) are least important; next rank the place spirits, which dwell everywhere, but are most important in the vicinity of human habitations. Of greatest importance are the spirits which inhabit mountains, rivers, lakes, springs, and the like. Spirits of local mountains and rivers are generally considered more influential than those in remote regions, and those of high mountains more important than those of smaller ones. These spirits (AČAČILA) are conceptualized as invisible old people, mostly male, who live under the earth. The house spirits (UIWIRI) can only prevent the theft or loss of property left in the house, but the place spirits may send disease, misfortune, or prosperity according to their disposition or whether they are persuaded by offerings. Spirits of natural phenomena may send illness because of temporary or natural malevolence. Place spirits, particularly those who live near human habitations, exercise considerable social control, because they regularly punish evildoers.

The major place spirits (AČAČILA) control meteorological phenomena, sending rain, hail, or frost, but winds are sent by spirits which inhabit volcanoes. The concept of "owners" of the food resources is not clear. Fish are said to be owned by the Lake Spirit, who demands that they be well treated. (See Fishing, p. 525.) All *Aymara* agree that respect should be shown to vegetable products, some maintaining that they are owned by place spirits and others that they are controlled by a vaguely defined female fertility spirit (PAČA MAMA).

Domestic animals are said to be owned either by place spirits, by a mountain spirit, or by a personified pampa spirit named Huasa Mallcu. (See Hunting, p. 520.)

In addition to malevolent place spirits and ghosts, there is a class of evil beings (SUPAYA) which inhabits ruins, caves, certain stones, and springs. Another group of personified demons, according to Bandelier, includes a beautiful young woman who causes insanity, an evil old hag who sends epidemics, and a three-headed water monster which lives in Lake Titicaca. A nocturnal demon appearing as a severed human head presages death. Another evil spirit owns all of the gold and silver in the earth (Bandelier, ms.).

Several supernatural beings defy classification. Images of a good-luck spirit (EQ'EQ'O) are kept in houses and adorned with miniature objects which represent the material desires of the *Aymara* (Paredes, 1936, pp. 32–36). This spirit is said to be connected with sex and fertility; fiestas in his honor are still celebrated. (See Public Ceremonials, p. 566.) The female fertility spirit (PAČA MAMA) is today identified with the Virgin; sacrifices are made to her in connection with agriculture. Another important supernatural being called T'UNUPA is the spirit of thunder and lightning (La Barre, ms.). The *Aymara* greatly fear lightning, which is the source of supernatural power. (See Practitioners of Magic, p. 564.)

Shrines.—In addition to the numerous sacrifices made to spirits of the houses and fields, offerings are made frequently at cairns and at shrines.

Cairns (APAČETA) are piles of stones placed on high mountain passes or where roads cross barren pampas. At these places, the traveler deposits an offering to gain new strength and to prevent himself and his animals from becoming sick. The offering is usually simple—a stone, an eyebrow hair, an old sandal, a coca quid or leaf, toasted grain, a straw, or a feather—but when a large party is traveling, the sacrifice may be more elaborate. Offerings are similarly made at river fords where the traveler, drinking three gulps of water, asks the river spirit to allow him to pass unharmed, and offers it coca or toasted grain.

The shrines (WAK'A) vary in their powers and in their attitudes toward mankind. Some are malignant and are not given sacrifices except in cases of illness caused by the evil spirits which inhabit them. (See Curing, p. 569.) Others, widely known for their special powers, are offered coca, flowers, and chicha. Some are consulted on questions of marital infidelity, while others are supplicated by barren women who desire children.

The third order of shrines is merely an elaboration of the last. On top of Atoja, a mountain near Chucuito, are two altars which were probably constructed in pre-Spanish times and which are employed chiefly in rites to bring rain. (See Public Ceremonials, p. 566.) The more important, called "Father Atoja," is a large boulder worked into the vague semblance of a human head facing east. Two large basins on its top represent eyes. A rubble platform against the front contains a niche which is said to be the mouth (pl. 111, *top, left*) and is the receptacle for offerings. The second altar, "Mother Atoja," is a U-shaped platform with parallel arms extending eastward. The principal altar is inside the opposite end, and three lesser altars are arranged around the three exterior sides.

Ritual and ceremonialism.—Modern *Aymara* ritual is extremely formal and stereotyped. On ceremonial and festive occasions, people beg one another's pardon, because it is believed that ill-feeling destroys the efficacy of the ceremony. Ritual washing is used in a number of situations. For example, after a funeral mourners wash their hands and rinse their mouths to rid themselves of grief and the effect of contact with the corpse. Similarly, widows wash themselves after the period of mourning, and new mothers after confinement. Ritual washing also magically removes disease. (See Curing, p. 569.) Purification in the smoke of ají or herbs has been mentioned in connection with birth and funeral customs. Breathing on offerings is an element of many rites and is also used to cure disease. Kneeling occurs in all ceremonies; although two knees are used in Christian rites, only one is employed in those of native origin. The very act of eating is a rite, because food must always be revered and never wasted. In addition, an *Aymara* eats a bit of earth at the spot where he has met with an accident in order to prevent its repetition. Chewing of coca is obligatory in all ceremonials, and coca bags are ritually exchanged among participants. Similarly, imbibing alcoholic beverages, drinking water when crossing a dangerous river, and partaking of blood on several occasions must be regarded as rites. Other ritual elements connected more specifically with sacrifices include libations, offering smoke, and burnt offerings, the ashes of which are deposited in a river or lake. Some sacrifices are buried and covered with stones (Bandelier, 1910, p. 98).

Three is clearly the ceremonial number of the *Aymara*. Rites and ritual elements must be performed three times to achieve their maximum efficacy. Coca leaves are usually offered in groups or multiples of three.

The question of the number of directions recognized ceremonially is more puzzling. Usually only the four cardinal points are counted, but occasionally seven directions are mentioned, including the zenith, nadir, and location on earth. Bandelier, however, states that there are five ceremonial directions (Bandelier, 1910, p. 95). There is some evidence that gold is connected with the north and silver with the south; other directions are not associated with color or sex. Although east is important ceremonially, the actual physical location of the place spirits (mountains, rivers, etc.) is more important than any cardinal direction.

In addition to the meager sacrifices deposited at the cairns and offerings to the dead, a large and varied list of objects is offered to the supernatural beings. Among the more important are coca, libations of intoxicants, smoke (incense, tobacco), ají, salt, flowers, q'oa (*Mentha pulegium*), blood sacrifices, llama fetuses, llama and vicuña fat, an unidentified mineral (qol̂pa), silver and gold (represented today by silver and gold leaf or by galena ore and iron pyrites), little metal figurines (čiuči), food (the most perfect vegetables and fish), and a miscellaneous array of candies, cookies, and other sweetmeats.

Elaborate sacrifices are restricted to rites performed by the white (paqo) and black (laiqa) magicians. (See Practitioners of Magic, p. 564, and pl. 111, *top, right.*) The offerings are extremely stereotyped; a few serve for all purposes and are made to all supernatural beings.

Libations (often to the east) accompany literally every ritual act and include sweet and intoxicating chicha, alcohol, wine, and sweetened water. They are commonly poured from sea shells, silver bowls, gourds, or wooden keros.

Coca is offered in many forms, the leaves usually in groups of three. In formal ceremonials, however, the most common offering is six perfect leaves placed one over the other (aita), green side up, with a sprinkling of *Mentha* (q'oa) and shaved llama fat on top. In more complicated offerings, 144 aita are prepared and arranged in 12 rows of 12 each.

One of the most elaborate all-purpose offerings consists of a square block molded from shaved llama fat and coated with gold and silver leaf. On top of this are placed pairs of little metal figurines, which represent all the possessions coveted by the average *Aymara* throughout his life. At midnight, this offering is burned with coca in a ring of dry llama manure, and the ashes deposited in a river.

Young white male llamas are most commonly offered in blood sacrifices, although occasionally sheep or bulls are also killed. On less important occasions, guinea pigs are sacrificed (Bandelier, 1910, p. 154). The sacrificial animal is tied kneeling and facing east. As the sun rises its throat is cut and the blood collected in basins, sea shells, or wooden keros (pl. 111, *bottom, left*). Then the heart is cut out and burned with offerings. Less frequently, the animal is killed by cutting into the side through the groin and removing the heart.

A llama fetus is an especially important offering, because it is thought to compel the spirits to act when other offerings have failed. The fetuses are often covered with gold and silver leaf before they are burned.

The *Aymara* possess a wide variety of amulets (il̂a), many of which are purchased from the traveling doctors (qol̂awayu). Amulets include stone, clay, bone, metal, and bezoar stones removed from the stomachs of llamas and vicuñas. When not worn on the person, they are usually kept in coca bags. They are often greased with a mixture of llama fat, coca, and flower petals. Some amulets are worn by children to protect them from evil spirits (see p. 550), whereas others ward off disease and witchcraft. Little stone figurines representing men and women are tied together for love magic. Amulets the shape of a human hand prevent fatigue and give luck in weaving. Paredes speaks of amulets called "CONOPA" which are kept in houses as family guardians (Paredes, 1936, p. 27). These are in human, fish, or phallic form and are smeared with the blood of sacrificed animals. Other amulets which represent animals are used in fertility rites (see Domesticated Animals, p. 520, and pl. 111, *bottom, right*), but have no power in themselves, simply representing the class of livestock for which the ceremony is performed.

Divination.—The *Aymara* consider divination necessary to every conceivable act and seek omens in nearly all nature. Not only may any person interpret omens, but special diviners (YATIRI) ascertain the future through the medium of coca. Practitioners of black magic (LAIQA) and of white magic (PAQO) and doctors (QOḼASIRI) likewise employ this method and, in addition, divine through special professional techniques. Although the generic *Aymara* word for diviner is YATIRI, additional names designate individuals who foretell the future through mediums other than coca. Certain diviners seek omens in the movement of spiders' legs, others use kernels of corn, and some observe the stars.

Divination through the medium of coca is the most common technique. Although many YATIRI, who are usually men, claim to have acquired their powers by being struck by lightning, this experience is not considered necessary merely to read coca, which either sex may do. In Chucuito, Perú (total population 554) there are five YATIRI, three of whom are middle-aged men, one an old man, while the last is an old woman. One of these YATIRI is studying to become a PAQO. Two of these individuals claimed to have been struck by lightning while in the mother's womb. The YATIRI requires no formal training and learns to divine by observation. Payment received by them usually consists of a small coin and some coca. Ordinary coca diviners may locate lost or stolen property, but require a list of suspects in order to name a thief. They can divine the outcome of a marriage or trading venture, discover cases of infidelity, and tell whether a sick person will live or die, but unless they are also doctors, they do not usually diagnose disease.

The *Aymara* have many methods of reading the future, and utilize most of the familiar divinatory techniques, including the observation of the flight of birds, the direction of smoke, the movement of flames, the positions of the stars, the viscera of animals, the interpretation of dreams, and the movement of objects floating in water. But scapulimancy is lacking. They utilize color (the green or white side of a coca leaf), texture (the rough or smooth side of a bone), odd and even numbers, and the appearance of burned minerals. They also consult supernatural beings.

In addition to the formal divinatory techniques, omens are important and govern all behavior. To mention a few: Owls and the whistle of a guinea pig presage death; comets forecast bad crops; and to see a condor while planting means good fortune.

As the soul is thought to leave the body temporarily while dreaming, much attention is paid to dreams. A person usually interprets his own dreams, but a witch (LAIQA) may be consulted in unusual cases (Bandelier, ms.). Most dream interpretation is stereotyped. Condors indicate success and llamas failure. Corpses or toads mean money, owls and guinea pigs presage bewitchment. To dream of horned animals usually means infidelity, of meat signifies death, and of excrement forecasts dishonor (Paredes, 1936, pp. 17–18).

Practitioners of magic.—The *Aymara* terms for practitioners of magic are somewhat confused, because the activities and techniques of these specialists tend to overlap. The generic *Aymara* word for "witch" or worker of black magic is LAIQA, whereas those who practice white magic are called PAQO. As both classes work chiefly at night, they are frequently designated Č'AMAKANI, literally "he who works in the dark." Other names used refer specifically to the techniques employed. A person often performs both black and white magic, but never willingly admits the former. Either sex may become magicians or witches, but most are men.

As the same person may work both black and white magic, it is not surprising that both kinds of supernatural power come from the same source, lightning. To practice magic, a man must be struck by two successive lightning bolts, the first of which is thought to kill him, the second to restore him to life. When sufficiently recovered, he must undergo a period of training in the black or white art. Of four PAQO in the town of Chucuito (total population 554), three claimed to have been struck by lightning. All of these individuals were classed as "mature men." (See Social Status, p. 541.) Of five persons at present learning the arts of the PAQO in Chucuito, four claimed this experience. Seven of the above individuals learned (or are learning) from teachers who were not considered to be related to them by blood; another claimed to be self-taught; while the last is learning from his brother. The apprentice acts as his teacher's assistant, and makes payments to him consisting of food, alcohol, coca, and small amounts of money. Although two individuals (both of whom are old men) in the district of Chucuito were accused of being LAIQA, no individuals in the town proper were named as witches.

Neither the PAQO nor the LAIQA is a shaman in the Asiatic sense. Both are "normal" psychologically, having no epilepsy, no trances during their seances, and no possession by supernatural spirits. Although ventriloquism is employed to impersonate the spirits and demons that arrive, there is no belief that the magician's soul takes flight. These individuals engage neither in display of power, contests, nor conjuring. The *Aymara* of Chucuito, however, atypically believe in a female witch who eats live coals, removes her eyeballs, and makes a magical flight to hell during the seance, but these concepts may be of Spanish introduction. In general, the black and white magicians lack familiar spirits and possess no power in their own right other than that of conversing with the supernatural beings. Their magical prowess rests on their ability to coerce spirits by means of offerings to do their bidding.

The *Aymara* live in terror of the black magician, who performs at night in secret, remote places. Although the activities of the witch (LAIQA) are not well known, his chief function seems to be to kill people with magic, to send disease at the bidding of his clients, to cause accidents, and to destroy the victim's livestock.[12] Apparently, he also cures some diseases, discovers and punishes thieves through black magic, and performs love magic. He divines by using coca, by interpreting dreams, and by invoking the spirits of the dead, of demons, and of owls.

The black magician (LAIQA) resorts to familiar techniques of imitative and contagious magic. To produce a spell, bodily exuviae or old clothing of the victim are required. An effigy of the intended victim is made of his clothing or of maize dough; or the person is represented by a live toad, lizard, or rat. The effigy is strangled or mutilated, to produce similar effects in the victim, and is then made into a bundle with the exuviae. This bundle is deposited, together with fox fat and threads which have been twisted backward, on a hilltop, at crossroads, in a chullpa, or at the abode of an evil spirit, or is buried on the victim's property. With the bundle, the witch leaves offerings to the evil spirit which he has invoked to make the spell effective; the offerings are made with the left hand. The witch may also accomplish his evil designs by bewitching the victim's urine and pouring it out at his door, by summoning his soul at night and injuring or killing it, or by bribing the place spirit to send disease.

The blood or urine of a witch is drunk to counteract witchcraft; amulets are carried and coca plastered on the forehead to ward it off. The spell may be reversed by washing the victim and dumping the water at the witch's door, or simply by looking at the witch, or at the person who desired the evil, with the knowledge of his guilt. Spells may be nullified by breaking a thread which has been spun in reverse (La Barre, ms.). More frequently, a white magician (PAQO) is engaged to counteract witchcraft by divining the whereabouts of the bundle, then burning it, or by pouring salt and the victim's urine on it and depositing it in running water. The attitudes toward the liability of witches for their evil acts vary. Formerly, many witches were burned to death and subsequently eaten (Bandelier, 1910, p. 127). Many *Aymara* feel today that the evil witch is not to blame, for witchcraft is his profession, and hold instead that his clients are guilty. Witches do not receive formal trial. When dead, they are buried face downward and are thought to go to hell.

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[12] Payments to LAIQA usually consist of substantial sums of money, coca, alcohol, and occasionally food.

The white magician (PAQO) seeks to promote health and prosperity. He cures disease, performs weather and love magic, offers sacrifices for the benefit of the crops and flocks, counteracts witchcraft, apprehends thieves, and finds lost property. He divines usually by using coca and by interviewing spirits. He cures sickness by counteracting witchcraft and by placating the spirits who either sent the disease or seized the patient's soul. Spirits are summoned in a séance to discover the cause of the infirmity, after which proper offerings are made. In addition to supernatural cures, the white magician usually has a considerable knowledge of herbal remedies. In the south of the Department of La Paz, he makes annual sacrifices to prevent epidemics (La Barre, ms.).

Although the *Aymara* possess no special weather shamans, the white magician performs rites to bring rain (see Public Ceremonials, p. 567), to prevent hail, and to prevent houses and livestock from being struck by lightning.

The apprehension of thieves through spirit aid is perhaps the most important function of the white magician. He performs at night, when everyone must remain silent, cover his head, and arm himself with a knife against such evil spirits as may be invoked. The lights are extinguished and the magician, employing ventriloquism, summons the spirits, which include all of the local place spirits (AČAČILA) and demons, as well as souls of the dead, the living, and animals. When the spirits arrive, they talk to each other and to the magician, but anyone may question them. If they are able to name the thief, the magician asks them to bring in his soul, which, after arriving, is beaten until it either denies or confesses the theft.

Public ceremonials.—As few public religious ceremonials of the *Aymara* survive, those which today are still largely aboriginal in character deserve some mention. Perhaps the more important of these are the ceremony performed to bring rain, the festival of the good-luck fertility spirit, EQ'EQ'O, and the ČOQELA ceremony.

The čoqela ceremony is performed regularly by the Peruvian *Aymara* in Ichu, Chucuito, and Juli and is also held, according to Bandelier, in western Bolivia (Bandelier, 1910, p. 103). Although representing the ritual hunting of the vicuña, it takes place after the harvest and is designed to produce large crops the following year. It is performed on hilltops. The group of performers consists of a chorus of women who do a posture dance and sing, carrying poles connected by woolen cords representing the vicuña fence (see Hunting, p. 519), an orchestra of men with special end-flutes and drums, a group of masked clowns led by a white magician (paqo), and a man who dances with a stuffed vicuña skin (pl. 112, *top*). A song describing the ritual hunting of the vicuña must be rendered letter perfect, while the masked clowns pantomine the hunt (pl. 112, *bottom*). These clowns wear fur masks and caps and heirloom ponchos decorated with tufts of fur and carry slings and miniature bolas. They mock the bystanders and occasionally are obscene. They may not talk during the performance, but must communicate by grunts. These clowns, said by some to represent spirits, are called ačačila, the generic word for supernatural beings. The man who dances with the stuffed vicuña imitates the antics of this animal. The rite culminates when the paqo sacrifices the vicuña and produces blood, meat, and intestines by sleight-of-hand. He also makes an offering to the place spirit to bring benefits to the community during the following year. Following this, the vicuña is magically revived and the rite is terminated.

Of the public weather-controlling rites performed by the white magician (paqo), the rain ceremony held in times of drought in Chucuito is perhaps the most elaborate. The community engages a paqo through the agency of the "public spirited men" (p'eqeña). The white magician then goes out into Lake Titicaca in a balsa and collects basins of water, frogs, and water plants from certain deep pools where he deposits offerings. He is accompanied by men in other balsas with panpipes and drums. After returning to shore, the magician, the orchestra, and the spectators climb the mountain named Atoja, and proceed to the shrine called Father Atoja (pl. 111, *top, left*) to deposit the water, plants, and frogs in the two basins of the altar which are exposed to the sun. The magician places offerings in the "mouth" of the altar, asking the mountain spirit to send rain. Everyone sings the frog song accompanied by panpipes, and drinks and chews coca. As the water evaporates, the frogs begin to cry out, whereupon the spirits pity them and send rain.

A festival, called alasita, for the good-luck fertility spirit (eq'eq'o; see Supernatural Beings, p. 560) is performed everywhere in *Aymara* territory (Paredes, 1936, pp. 170–73). Often it takes place in fixed spots where miniature stone houses are built and repaired each year.

The houses are filled with miniature clay animals, utensils, implements, and articles of clothing in order that the owner may acquire all of these things during the following year. A mock market is held during which the objects are bought and sold with potsherds. They are later given to the children for toys. In parts of Bolivia, images of the fertility spirit (EQ'EQ'O) are kept in the houses. The fiesta is accompanied by considerable sexual license among the younger *Aymara.*

Diseases and medicines.—Curing is an absorbing interest of the *Aymara.* Its elaborate development is reflected in the extensive terminology of diseases, medicines, practitioners, and curing techniques. It is recognized that people of different ages are susceptible to special ailments. All adults have some knowledge of simple herbal remedies and treat slight injuries; a doctor is not consulted unless the ailment or injury is persistent and specialized knowledge required.

Diseases are thought to be due mainly to evil spirits and witchcraft, although a few are attributed to natural causes. All the latter are classified as hot or cold and require a remedy of the opposite temperature. These concepts of hot and cold may come from Spanish influence. The general procedure is for the practitioner to divine the cause of disease according to his particular method, and then to cure it by medical or magical techniques.

Beliefs about the cause of disease are numerous. They include seeing ghosts, the soul becoming lost or having been kidnapped by evil spirits or witches, dreams, being looked at by evil spirits, intrusion of an object into the body, mutilation of one's effigy in witchcraft, and the "evil eye," the last possibly being a Spanish concept. Most of these have been discussed earlier in connection with witchcraft and supernatural beings. Soul loss, an ailment particularly common among children, results from fright or shock. If the child's mother is unable to make the soul return by calling to it, a doctor makes an image of the child's clothes, entices the soul into it, and places the image in the child's bed (Paredes, 1936, pp. 116–17). The intrusion of a fragment of human bone into the body is the cause of "chullpa sickness," which comes from witchcraft or malevolent spirits which inhabit ruins. The bone is extracted magically in a variety of ways, but is not removed by sucking.

A great variety of medicines are taken both internally and externally. Most are vegetable, the roots, seeds, leaves, and flowers being taken for specific purposes. One or several plant species may be combined in a given medicine. Remedies of animal derivation, next in importance, include various portions of mammals, birds, reptiles, fish, larvae, insects, starfish, sea urchins, and mollusks. Minerals rank third as medicines, mercury being used to treat syphilis and certain clays to stop internal bleeding. Last in importance ranks human flesh, desiccated bits of which are eaten to cure ghost sickness.

Medicines are most commonly taken as infusions, in either water or milk, human milk being prescribed for some ailments. Poultices are frequently used in treating wounds and to reduce swelling, and coca leaves are plastered on the face to cure headache or toothache. Vapor inhalants are employed in some respiratory ailments and burning owl feathers are used to cure earache. Freshly killed lizards are applied to injured limbs to reduce the swelling and to draw out bad blood, and snakes are employed in a similar manner to cause new bone and tissue to grow.

Curing.—Powers to cure disease are shared by several classes of doctors, who are distinguished by the types of disease in which they specialize, their techniques of diagnosis, and their methods of curing. In addition to specialists in magical cures (see Practitioners of Magic, p. 564), three classes of medical practitioners (the QOḼAWAYU, the TʻALIRI, and the QOḼASIRI) cure by essentially practical means, although employing some magic. These doctors appear to require no supernatural experience in order to practice their professions.

The medical terminology is complex. The generic word for medicine is QOL̬A and for doctor, QOḼASIRI, literally, "he who knows medicine"; other names for doctors refer specifically to the techniques they employ. Although either sex may practice medicine, most doctors are men. Doctors who continually fail in their cures are often driven from the community and occasionally are killed by the angry relatives of a deceased patient.

Much has been written about the QOḼAWAYU, the most famous of *Aymara* doctors. (See Paredes, 1936, pp. 185–95; Bandelier, 1910, pp. 103, 155; La Barre, ms.) These traveling herbalists and vendors of amulets live chiefly in the Provinces of Caupolicán and Muñecas in Bolivia and constitute a special cultural subgroup of the *Aymara*. They possess distinctive dress and customs, and are said by some to speak a special dialect of the *Aymara* language. All men of this subtribe are trained as herbalists. They travel widely over South America, often being away from their villages for several years.

The TʻALIRI are chiropractors and usually also midwives. In Chucuito, Perú (total population 554), there are three TʻALIRI, two of whom are old women, while one is an old man. The *Aymara* believe that the heart may be dislocated through shock or an accident, whereupon these practitioners are engaged to return it to its normal position by massage and by jerking the patient's torso.

The QOḼASIRI are bone-setters, herbalists, and general practitioners who tend strongly to specialize. Some are known for their abilities to diagnose disease, some for their success in internal medicine, and others for their skill as bone-setters. The QOḼASIRI ordinarily divines with coca, but uses a guinea pig for more important cases. He places the live guinea pig in contact with the patient's body for a short time, after which the patient breathes on it three times. The guinea pig is then cut open and examined; any defective organs indicate which of the patient's organs are diseased. In a similar diagnosis, an unidentified mineral called QOḼPA is placed in contact with the patient's body, burned, and the cause of disease divined from its remains. A third technique involves a mineral (MIḼU, largely alum) which is placed in the patient's urine (La Barre, ms.).

In Chucuito, there are two QOLASIRI, both of whom are middle-aged men. One of these individuals learned to cure from his father, while the other learned from his paternal uncle.

After the diagnosis, the doctor may cure with various medicines. The disease, if due to evil spirits, may be transferred magically to the object used in the diagnosis, which is then either destroyed or returned to the source of the evil, or the disease may be magically sent away. The patient is made to lie down on a blanket which is covered with food, clothing, and valuables, after which he is washed and the water and the other objects deposited near a river; whoever carries away these also carries away the disease. Formerly, in the event of an epidemic, a black llama was loaded with the clothing of the infected person and driven out of the village to carry away the disease (Forbes, 1870, p. 45).

Doctors also administer emetics and cathartics but use no enemas. Herbs are given to speed difficult births and to shorten menstrual periods. Sprains and dislocations are massaged with chewed coca. While bloodletting is occasionally practiced, it is probably of Spanish introduction (Bandelier, ms.).

Surgery today is simple; amputation is not practiced, nor teeth extracted. Broken bones are set in many thin splints. Formerly, the *Aymara* successfully trepanned crania in order to relieve depressed skull fractures, although this practice appears to be obsolete today. If the patient is in pain, he is made to drink himself into a state of insensibility and to chew a quantity of coca for its anesthetic effect.

MYTHOLOGY

Only fragments of formal myths survive today, numerous and varied folk tales, most of which deal with animals, being more common. A number of miracle tales and ghost stories of Spanish origin are also related.

Of the Viracocha legend there are many variations. The principal theme states that Viracocha rose from Lake Titicaca, created the earth, sky, and man, and then resubmerged. Later, because man was disobedient, he reappeared and led the people to Tiahuanaco, where he turned the wicked ones into stone. Then he created the sun, moon, and stars, because man had previously lived in darkness. Often confounded with Viracocha is Thunnupa, a bearded White man who came from the north and who opposed polygamy and chicha (Paredes, 1936, pp. 21–40).

According to a series of fragmentary legends, the various ayllus emerged from caves, mountain peaks, lakes, and rivers. Myths trace the origin of the *Aymara* to the site of Tiahuanaco. The origin of the chullpas is today explained in a legend that men originally lived in darkness. Because a diviner foretold the coming of the sun, the people built houses with the doors to the east; when the sun rose, they perished. In one version of this myth, the origin of cultivated plants is attributed to the chullpa people (Bandelier, ms.).

Various allusions are made to a period when the earth was flooded; a flood legend is mentioned by Cieza de León (1932, p. 314). According to one version, Snake and Frog fought for the supremacy of the world when the earth was covered by water. The sun intervened, dried up the water, and returned the earth to mankind.

Many myths deal with the origin of natural phenomena. One states that the sun rose out of Lake Titicaca and that the mother of the sun was Mama Ocllo. Another legend tells of a combat between the sun and the moon (Bandelier, 1910, p. 315), while still another relates that the moon is wife of the sun and the stars are his children. Hail, ice, and wind are said originally to have been three lazy brothers who refused to tend their fields. In another myth, the Morning and Evening Stars, who were brother and sister, fled from their grandmother after eating the seed potatoes she gave them to plant. The sun punished them by turning them into stars and placing them so that they might never see each other again.

Fragments of historical tales about the *Inca* survive, but are highly garbled and combined with supernatural allusions. Although some of these mention Manco Capac, most deal with the *Inca* conquest of the Collao.

Many animal tales are related, most of them appearing to be aboriginal, although some have familiar Aesop motives. Human characters appear in these as well as animals, the latter assuming human form for purposes of deception. Most tales deal with Fox but may include other mammals, birds, fish, frogs, and snakes. Fox is portrayed as a comical character, a trickster who is invariably outwitted and usually meets a tragic end. In a typical tale, Fox steals Gull's children and hides them in a bundle on his back. When he leaves the bundle while looking for food, Gull recovers the children and fills the bundle with thorns. Fox, enraged by the trick, attempts to reach Gull by drinking Lake Titicaca dry and explodes.

LORE AND LEARNING

As an agricultural people the *Aymara* pay considerable attention to meteorological phenomena. The east is the most important ceremonial direction, but little attention is paid to the sun either in ritual or in everyday behavior. There is a great deal of star lore and some constellations are named. The moon, however, is the most important heavenly body, all aspects of agriculture being governed by its phases and appearance (Paredes, 1936, p. 85). Because the word PAXSI means both "moon" and "month," it is presumed that the *Aymara* possessed a lunar calendar in pre-Spanish times. Cieza makes the obscure statement that the *Colla* counted their year from "ten months to ten months" (Cieza de León, 1924, p. 319). The month names are not used today, although Bertonio gives an incomplete list (Bertonio, 1879 b). It is probable that the *Aymara*, like the *Inca*, named a month after its outstanding fiesta. Although the equinoxes are not recognized, the solstices are ascertained by observing the position of the sun in relation to fixed geographical points.

The *Aymara's* numerical system is decimal and has words for numbers up to 1,000; quantities larger than this are called simply "uncountable thousands." The fingers aid counting, the spaces between being counted as well as the fingers. The simple quipu, a system of knotted strings, is used to keep records in numerical form; strings of different colors represent the categories while each knot indicates one unit. Pebbles are occasionally employed as a mnemonic aid to counting warp threads when weaving; each pebble represents 10 threads. Although the *Aymara* possessed no writing in pre-Spanish times, they invented a pictographic system during the Colonial Period (Nordenskiöld, 1930, pp. 107–08).

The *Aymara* possess measures of distance ranging from several inches to several miles. The smallest named measurement is the width of the hand, excluding the thumb. Others include the distance between the outstretched thumb and index finger, between the thumb and little finger, between the sternum and the tip of the outstretched right arm, and between the fingertips of both hands when the arms are outstretched laterally. The greatest measurement is the *Inca* "league" or topo, approximately 5 miles (8.05 km.) (La Barre, ms.).

Apparently the only *Aymara* surface measurement is also the topo, an area of some 2.4 acres (1 hectare). La Barre adds that the topo also designates a dry measure of about 1½ bushels (52.86 liters), as well as a wet measure of approximately 12 gallons (45.42 liters) (La Barre, ms.). Other measurements of volume are the single and double handful. Vegetable produce is frequently measured by sacks, which are more or less uniform in size.

At the present time the *Aymara* possess no native measures of weight. The antiquity of the beam-scale in this region is doubtful.

Space precludes discussion of *Aymara* folk science, which is particularly well treated by La Barre (ms.). Botanical, zoological, and anatomical knowledge is exceptionally rich.

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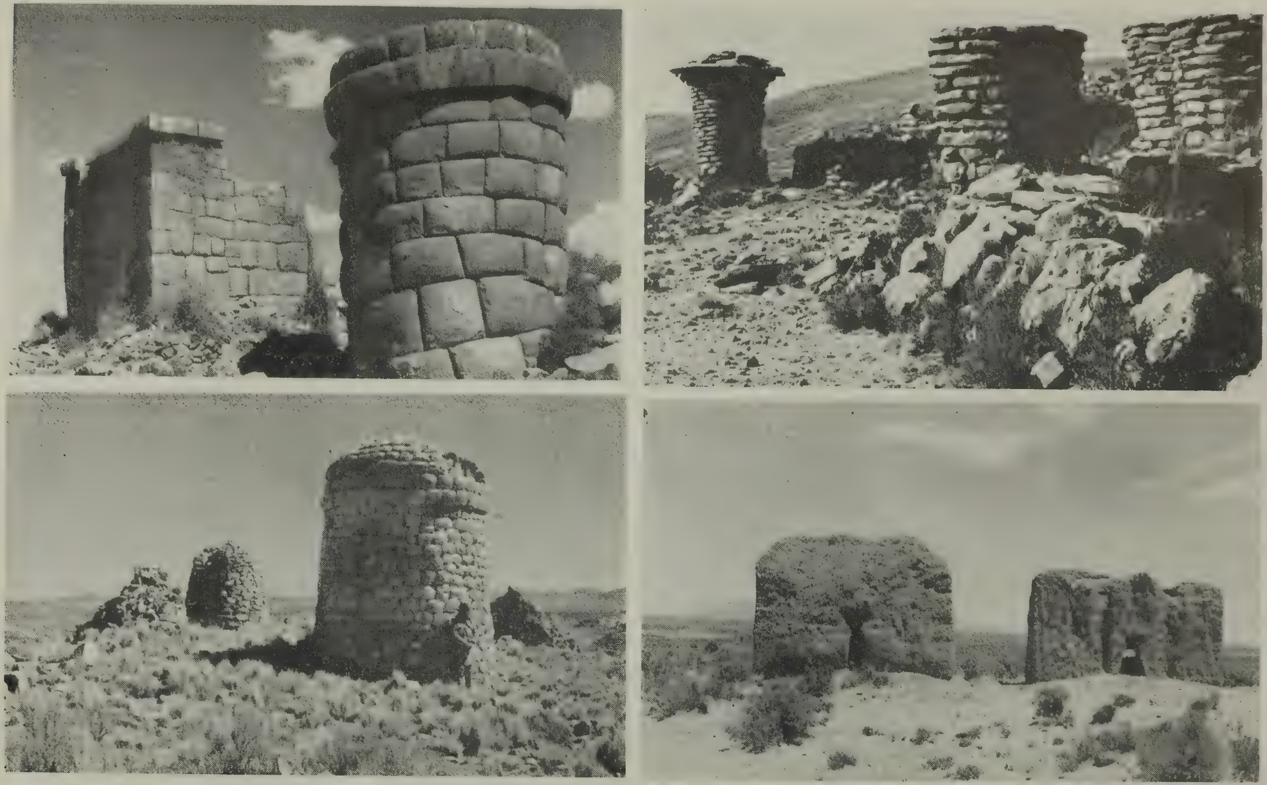


Plate 101.—**Chullpas in Aymara country.** *Top (left)*: Qutimpu, Perú. *Top (right)*: Paro Paro, Perú. *Bottom (left)*: Arku Punku, Perú. (Courtesy Harry Tschopik, Jr.) *Bottom (right)*: Chullpas in *Aymara* country of Carangas, Bolivia. (Courtesy Alfred Métraux.)

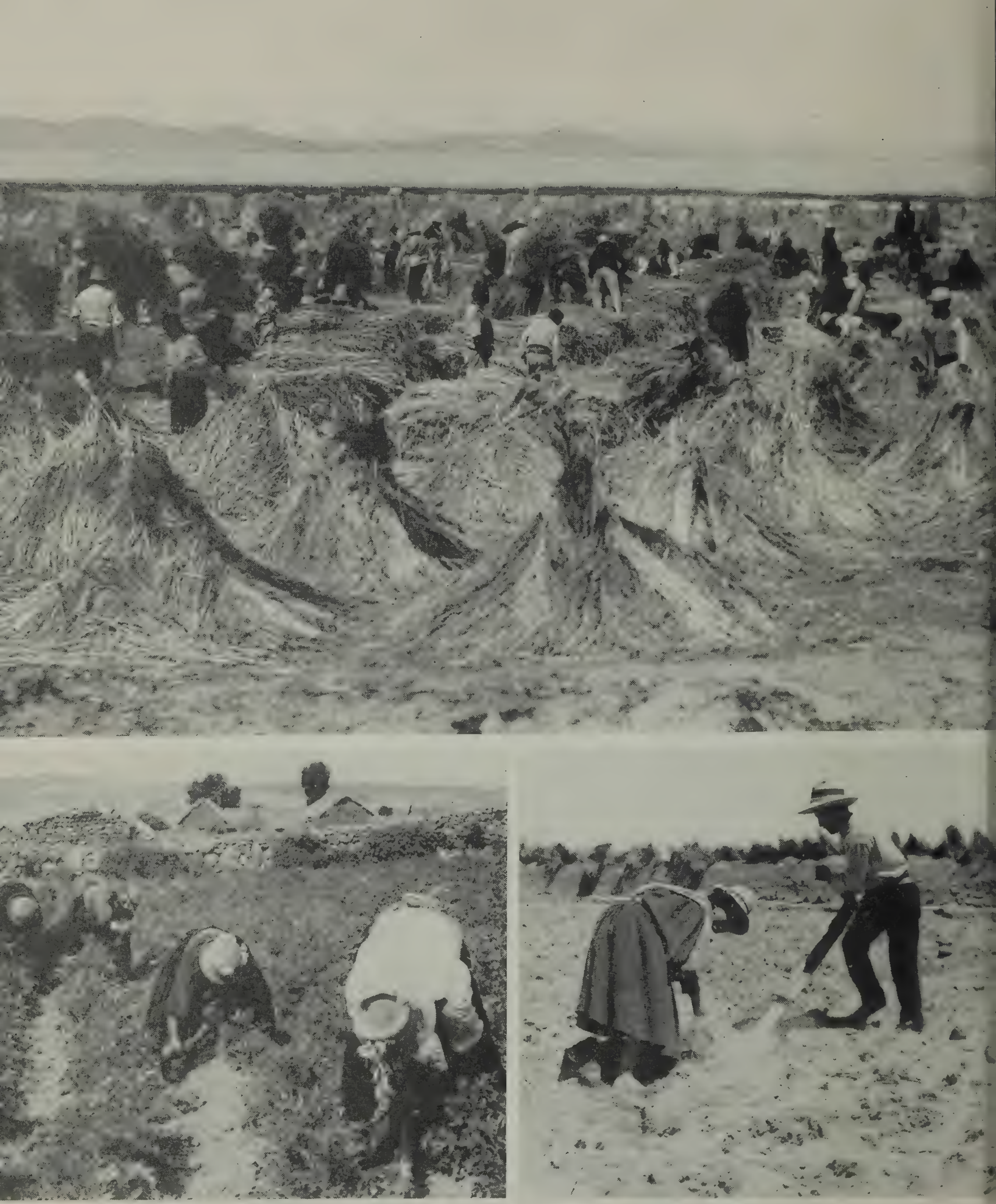


Plate 102.—**Aymara agriculture.** *Top:* Harvesting, Lake Titicaca region, Bolivia. (Courtesy James Sawders.) *Bottom (left):* Banking potatoes, Chucuito, Perú. (Courtesy Harry Tschopik, Jr.) *Bottom (right):* Using a wooden spade, Bolivia. (Courtesy Alfred Métraux.)

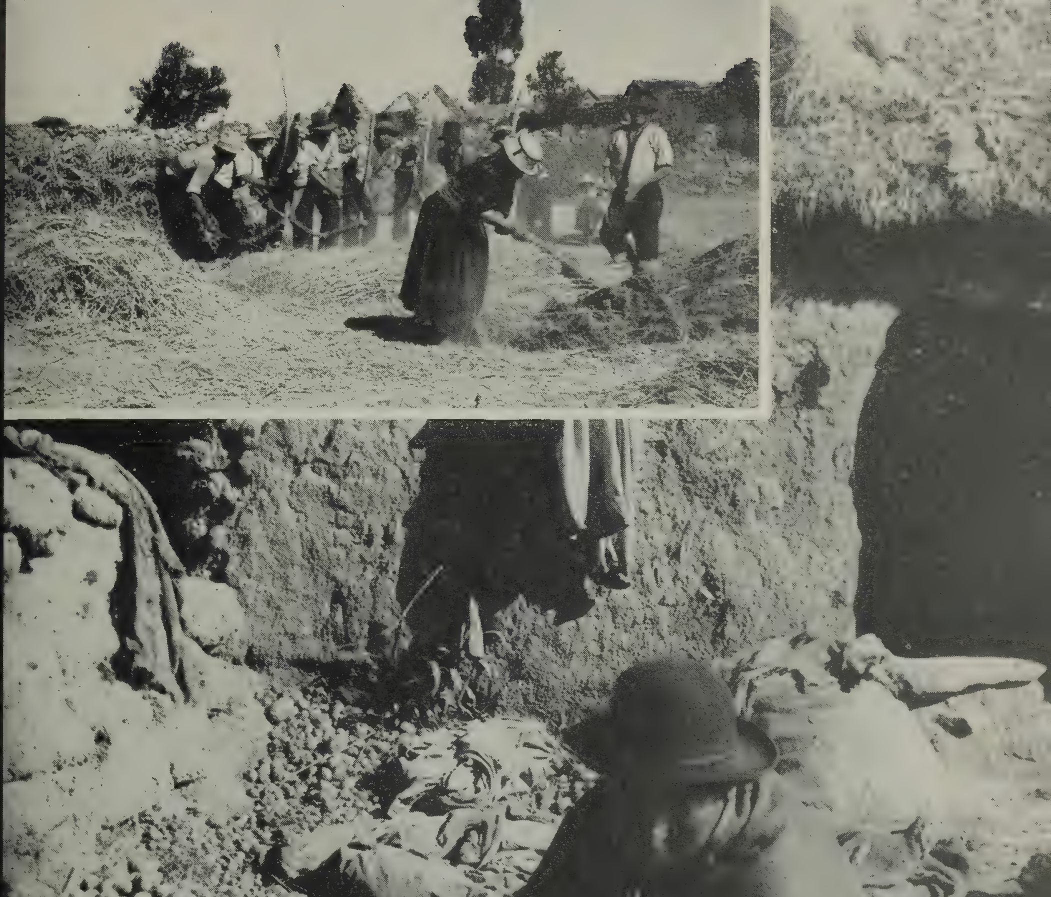


Plate 103.—**Aymara preparing quinoa.** *Top:* Threshing at Chucuito, Perú. (Courtesy Harry Tschopik, Jr.) *Bottom:* Making flour, Bolivian altiplano. (Courtesy James Sawders.)

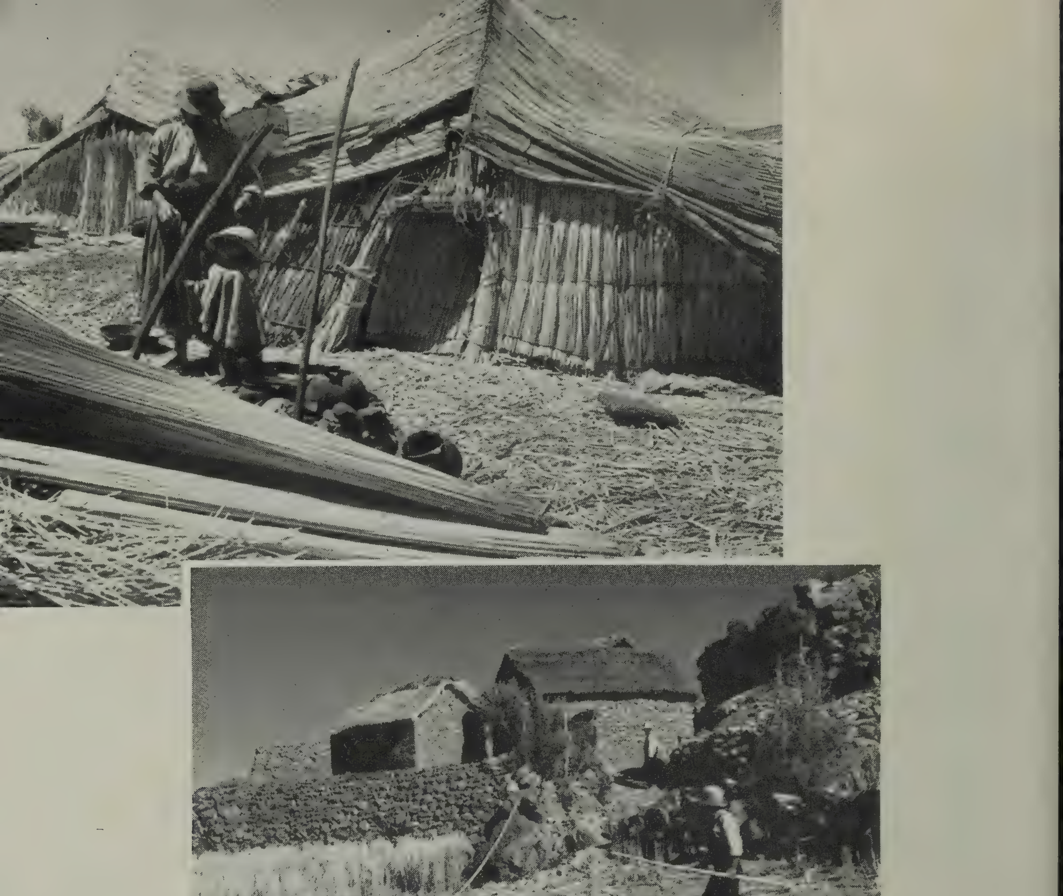


Plate 104.—**Aymara house types.** *Top:* Mat-covered shelters, Lake Titicaca region, Perú. (Courtesy Truman Bailey.) *Center:* Gable-roof house. *Bottom:* Hip-roof house. (Courtesy Harry Tschopik, Jr.)

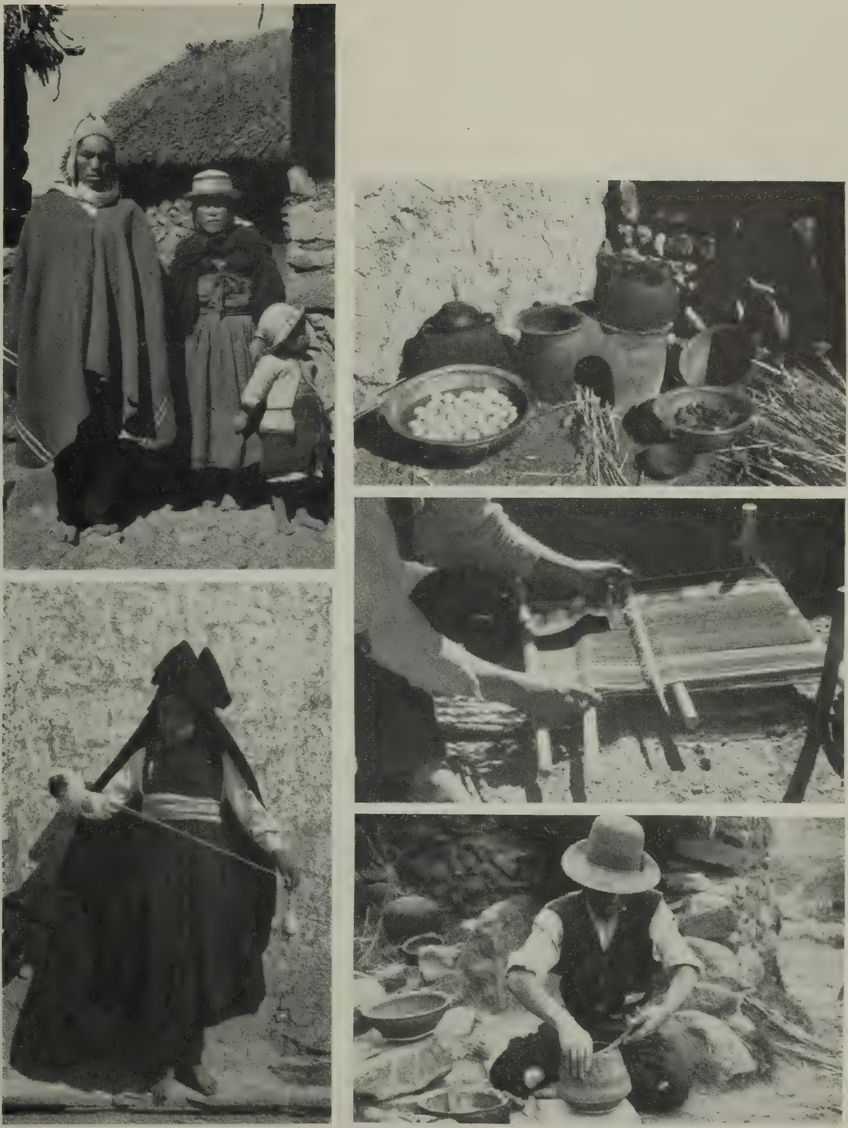


PLATE 105.—**Aymara dress and manufactures.** *Top* (*left*): Modern costumes, Chucuito, Perú. *Top* (*right*): A pottery stove. *Center* (*right*): A loom, Chucuito, Perú. *Bottom* (*left*): Old style woman's dress, Ichu, Perú. *Bottom* (*right*): Pottery making, Chucuito, Perú. (Courtesy Harry Tschopik, Jr.)

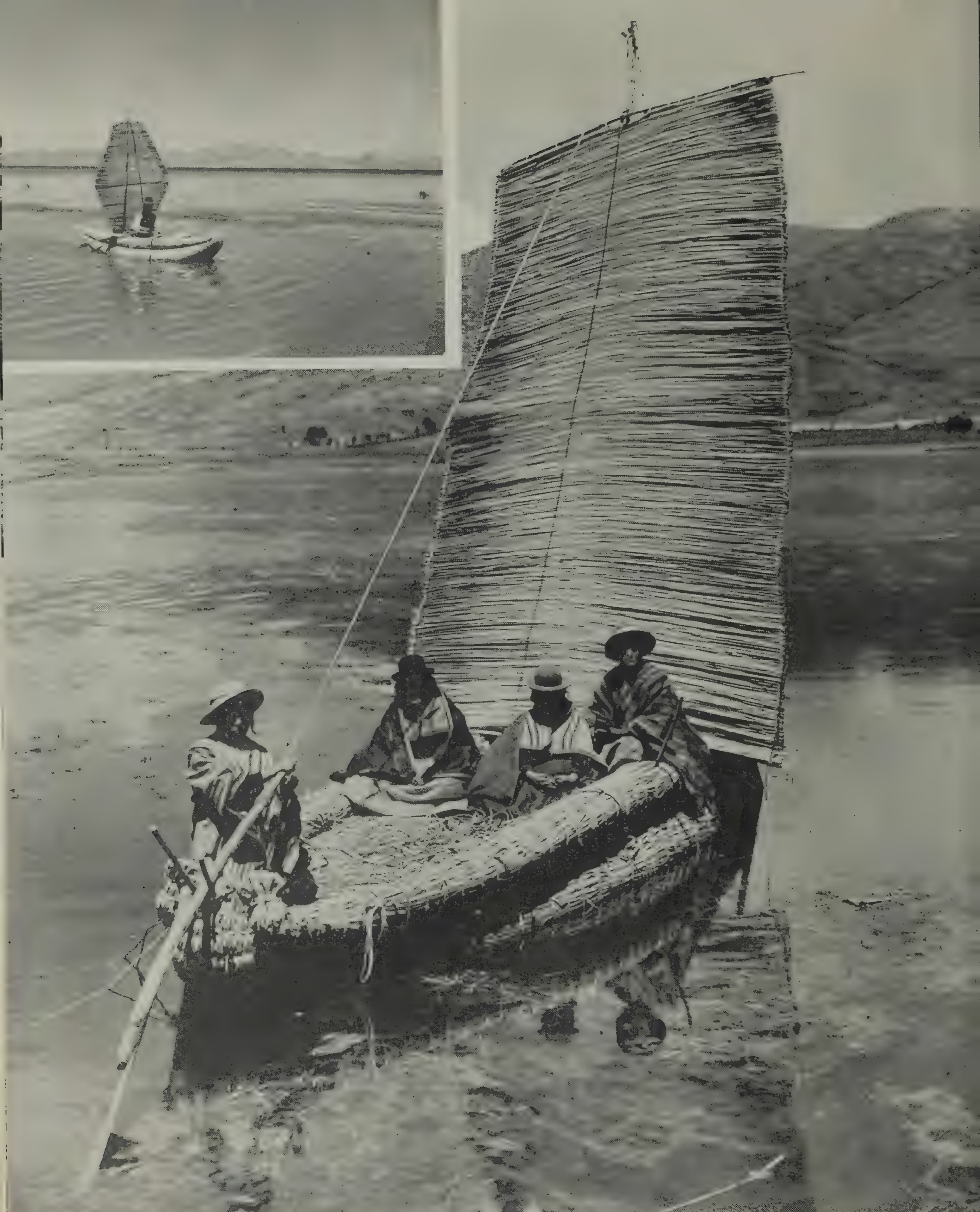


PLATE 106.—**Balsas on Lake Titicaca.** (Courtesy Truman Bailey and courtesy Grace Line.)

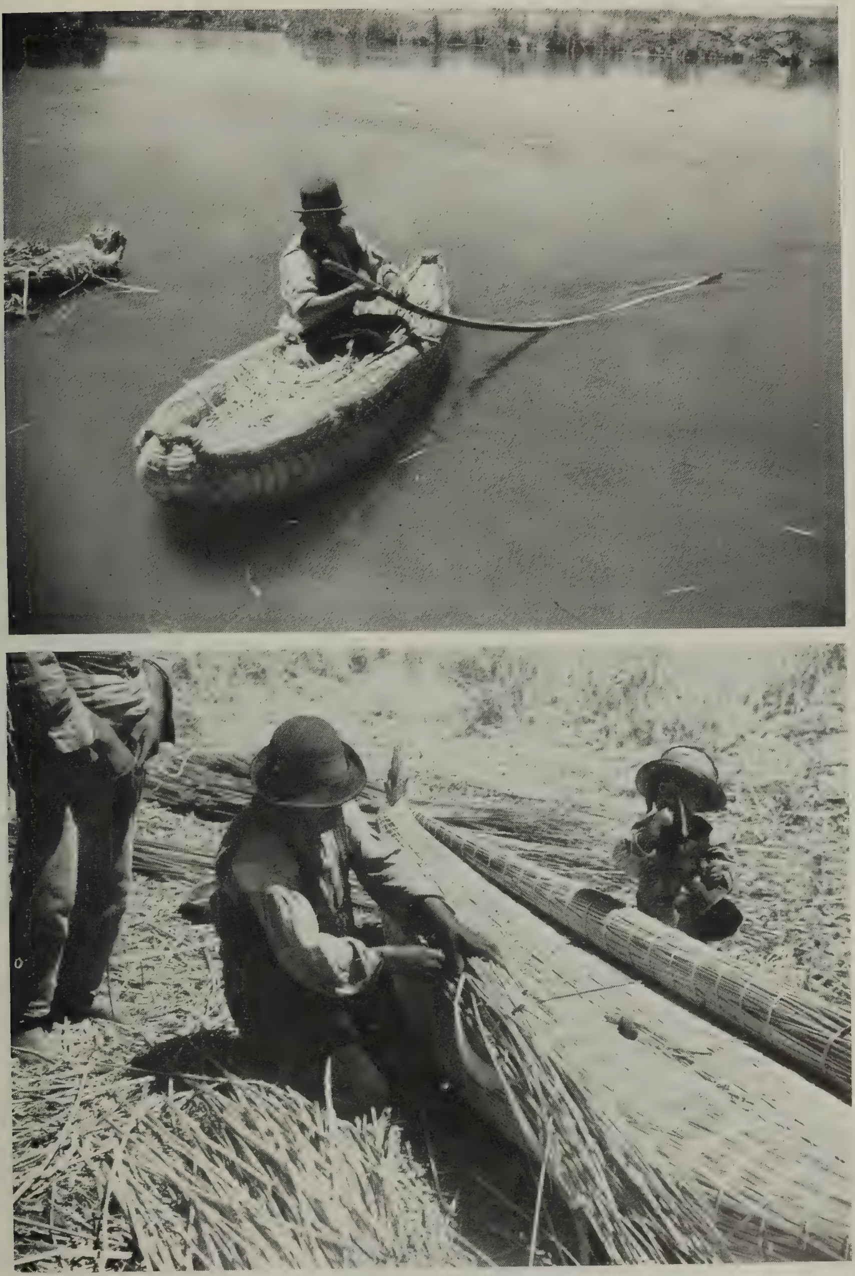


PLATE 107.—**Balsas, Titicaca region.** *Top:* Pushing a small fishing balsa through shallow water. *Bottom:* Making a balsa. (Courtesy Truman Bailey.)

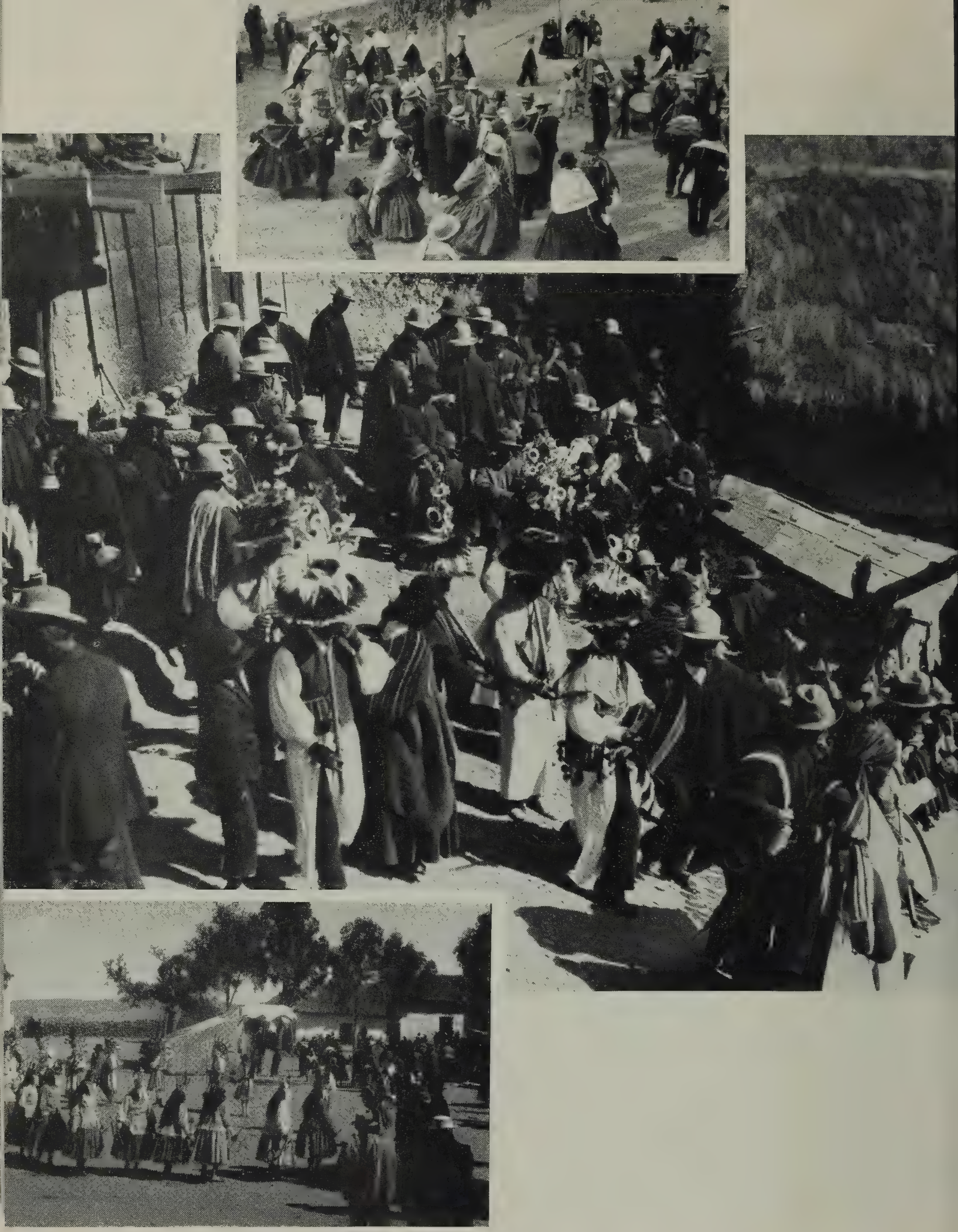


PLATE 108.—**Aymara dances.** *Top:* Easter dance, Chucuito, Perú. (Courtesy Harry Tschopik, Jr.) *Center:* Dancers in the streets of the village of Sorata, Bolivia. (Courtesy James Sawders.) *Bottom:* Č'UNČ'U dance, Chucuito, Perú. (Courtesy Harry Tschopik, Jr.)

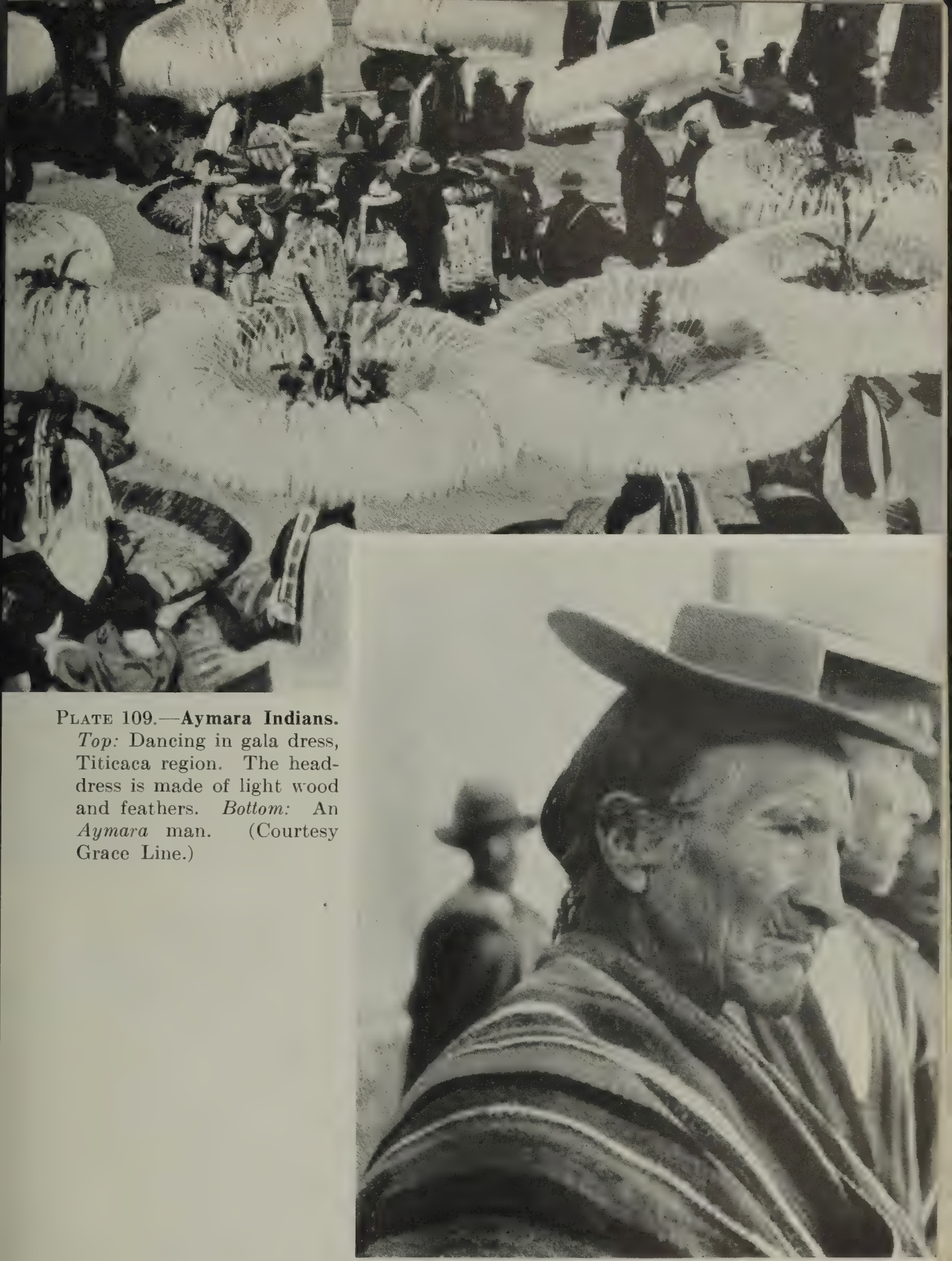


Plate 109.—Aymara Indians. *Top:* Dancing in gala dress, Titicaca region. The headdress is made of light wood and feathers. *Bottom:* An *Aymara* man. (Courtesy Grace Line.)

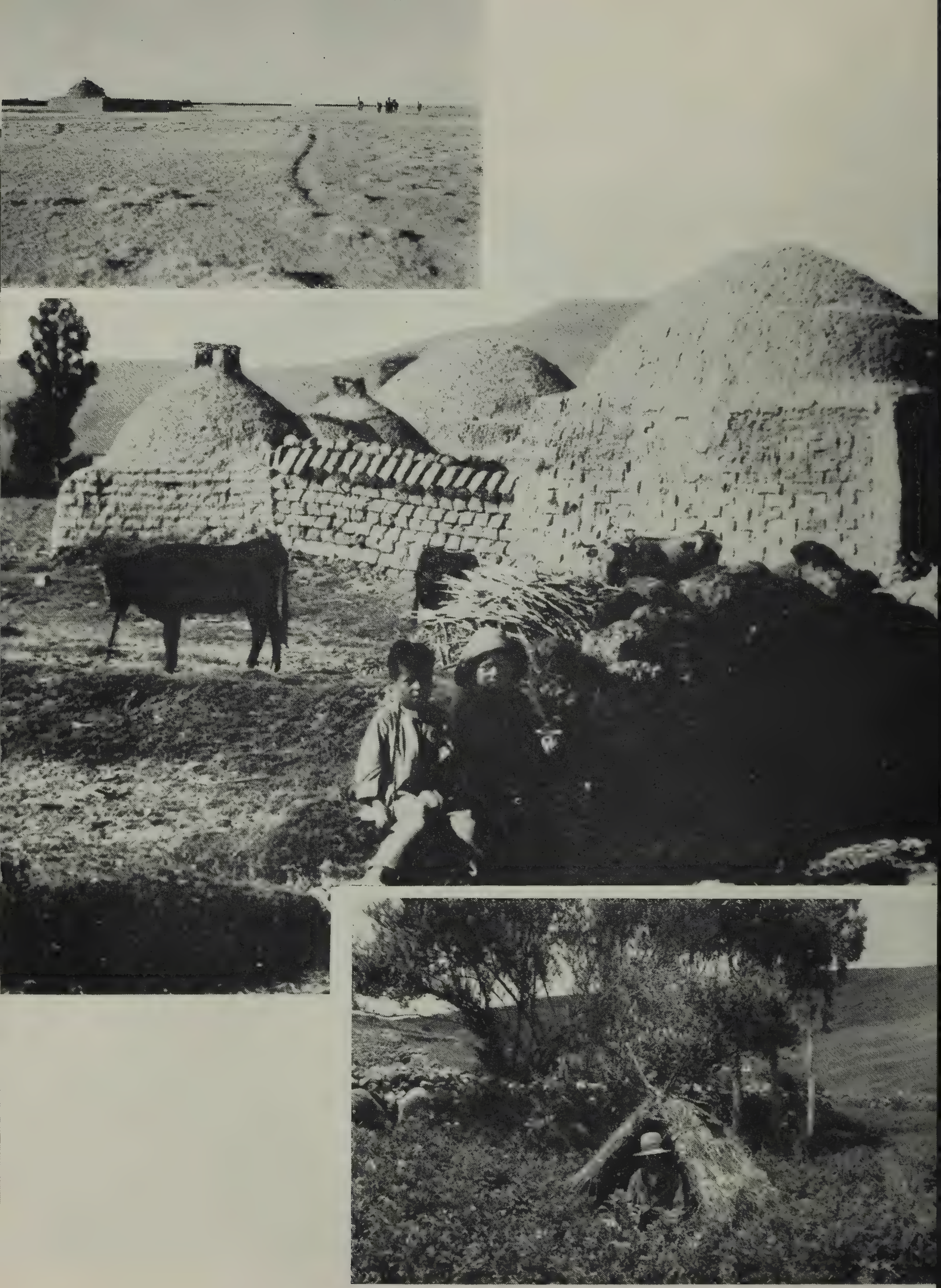


Plate 110.—**Scenes in the Aymara country.** *Top:* Desert of Carangas with sod-vaulted hut in distance. (Courtesy Alfred Métraux.) *Center:* Village of Punata, Bolivia, with sod-vaulted huts. (Courtesy Grace Line.) *Bottom:* Guard house in a field, Chucuito, Perú. (Courtesy Harry Tschopik, Jr.)

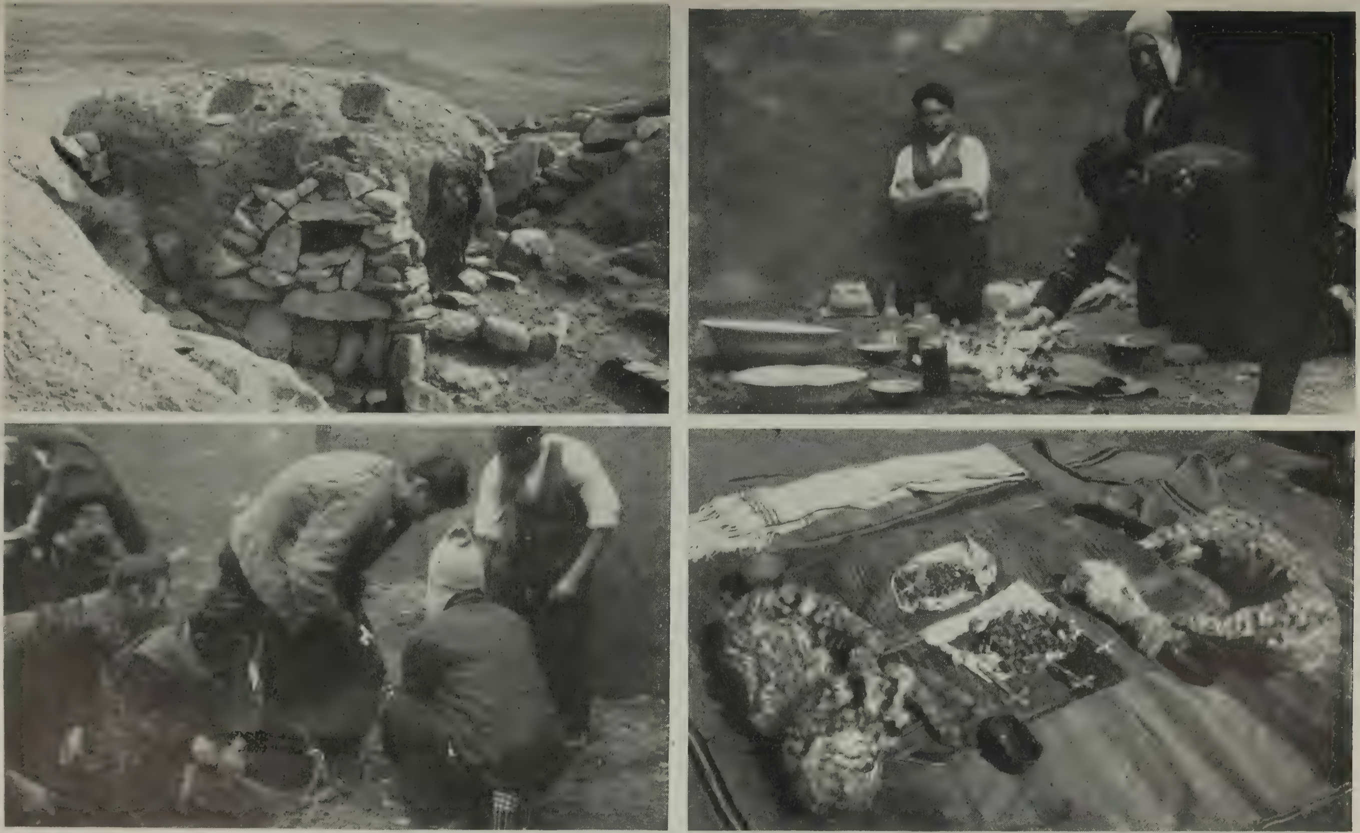


Plate 111.—**Aymara ritual.** *Top* (*left*): Shrine of "Father Atoja," Chucuito, Perú. *Top* (*right*): Offerings made to place spirit in house building rites. *Bottom* (*left*): Llama sacrifice in house-building rites. *Bottom* (*right*): Paraphernalia and amulets arranged for animal increase rite. All from Chucuito, Peru. (Courtesy Harry Tschopik, Jr.)

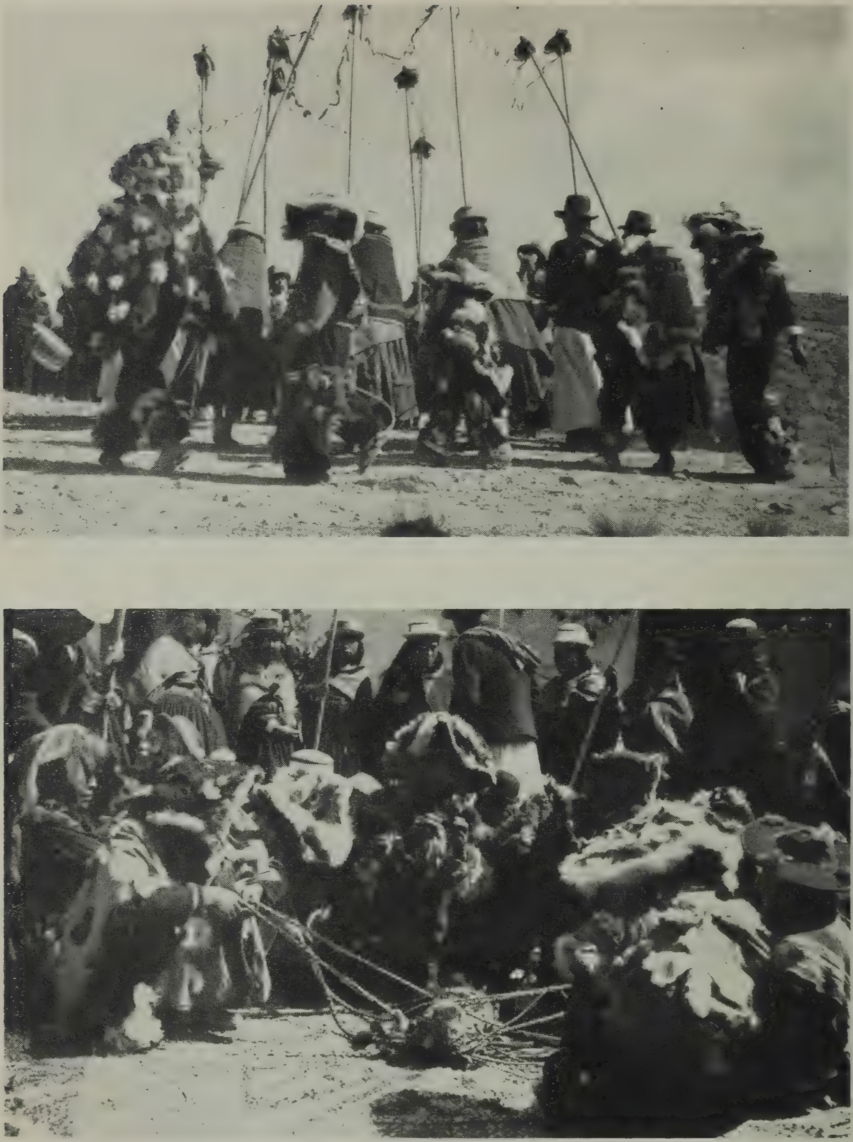


PLATE 112.—**Aymara Čoqela rite.** Chucuito, Perú. (Courtesy Harry Tschopik, Jr.)

THE URU-CHIPAYA

By Weston La Barre

THE URU

TRIBAL DIVISIONS AND HISTORY

The *Uru* (*Uro, Huno, Ochomazo, Ochozuma, Uchumi, Kjotsuni, Bukina, Pukina, Puquina, Urocolla, Uroquilla, Yuracare* (not to be confused with eastern Bolivian *Yuracare*), *Kiuchacatati* or "Big-livered People," and *Chancumankkeri* or "Water-greens Eaters," the last two opprobrious *Aymara* nicknames, inhabit the region of Lake Titicaca and some of the watercourses of the inter-Andean Plateau (map 1, *No. 6;* map 4). "Uro" or "uru" seems to have been used commonly in the 17th century to mean "dirty, ragged, rustic," etc. It is now the most common name of these people. They call their language *Puquina.*

The *Uru* language has no connection with either *Quechua* or *Aymara.* It is probably the same, however, as the *Puquina* of the 17th century (Oré, 1607), although it is not the same as the *Puquina-Uro* of De la Grasserie (1894). The *Puquina* spoken by the Desaguadero *Uru* is closely related to the *Chipaya* of Lake Poopó, and Métraux (1936 a) therefore established an *Uro-Chipaya* family. Rivet's classification of *Uru* as *Arawakan* has not been widely accepted by linguists. We consider *Uro-Chipaya* to be an independent linguistic family.

Uru was called a "lengua general" of Perú by 16th-century writers (the "Relaciones geográficas de Indias" in 1582 calls it "one of the three general languages of the kingdom"), although its known distribution at a later date was confined to a few people scattered on the islands of Lake Titicaca, in the Río Desaguadero swamps, and near Lake Poopó. Vázquez de Espinosa (1942) found *Puquina* spoken in Sucre and *Uru* settlements in the Cochabamba Valley. *Uru* evidently once had a much wider distribution than in recent times.

The Highland *Uru* all now speak both *Aymara* and *Uru,* and a few know a little Spanish.

The *Uru* of the coast of Tarapacá and Tacna are similar culturally to the *Chango* and are sometimes even called *Chango.* They are said to be descendants of the *Uru* of Lake Titicaca sent as colonists (mitimaes) in *Inca* times. But, as all now speak Spanish and no trace of their native language remains, it is impossible to know whether they were linguistically related to the *Uru* of Lake Titicaca. It is highly possible that they were different, for "*Uru*" has been used even more inclusively than "*Chango*" and may have been applied to peoples of different languages.

Uru history is little known. The most ancient Highland *Uru* tradition, that in prehistoric times their bodies were used as binding material in building the great *Colla* structures, probably signifies that human beings were sacrificed when foundations were laid. They claim to be the oldest race in the world, antedating the sun. It is said that they are the people involved in the famous tribute of lice to the *Inca*.

In earliest historic times, the *Uru* appear to have lived on the numerous islands of Lake Titicaca and in the reed (totora) swamps of the Río Desaguadero. Alcedo, writing in the latter half of the 18th century, said that they were removed against their will from the islands of the lake to the mainland, where they dwelt in gloomy caves and holes in the ground covered with reeds. At the end of the 19th century, *Uru* was still spoken in scattered places: Ahuallamaya, Ancoaqui, Iruitu, and Nazacara in the Río Desaguadero region of Bolivia; and in Simiñaque and Sojapata in Perú (Polo, 1901). In 1873, there were *Uru* haciendas at Chearaque, Taguau, Tacacatani, Chicani-uma, Machacamarca, Urcuni-uma, Huallaqueri, Calayampani, and Tocavi. There were 937 persons (448 males, 498 females), of whom 809 were Indians in the Peruvian section, but as this number included *Aymara*, it is doubtful if there were more than 200 *Uru* in 1873. In 1938, there were 30 taxable persons in the Ancoaqui area, which agrees well with Métraux's estimate (1936 a) that the entire Río Desaguadero region had less than 100 *Uru* in 1931.

Recently, the Ancoaqui *Uru* have been despoiled of their lands by the *Aymara* comunarios of Jesús de Machaca and retain only the few thousand square meters on which their village stands.

The Coast *Uru* are little known. Locana Machuca (Latcham, 1910) noted 400 fishermen in the cove of Atacama (Cobija), others from the Río Loa north to Pisagua on the Tarapacá coast, and "more than a thousand on the coast of Arequipa."

Unlike the friendly *Uru* of the Coast, the Highland *Uru* have long had a reputation for truculence and meanness. A 17th-century rhyme states that, "De indio Uro ningun hombre está seguro (No one is safe with an *Uru* Indian)." Acosta said that they were so brutish they did not even consider themselves human. Garcilaso called them "rude and stupid," and even the sympathetic Bertonio wrote of them as "a tribe of Indians looked down upon by everyone and of very low intelligence." Métraux found even the *Chipaya* less morbidly distrustful, suspicious, fearful, brutal, and stupidly avaricious than the

Uru, who, at best, are an inhospitable, apathetic, and hate-filled group which has been condemned and harassed throughout its history.

The culture of the *Uru* is now largely like that of the *Aymara*, with whom they have recently extensively intermarried, but it preserves several interesting archaic features of altiplano culture.

CULTURE

SUBSISTENCE ACTIVITIES

Fishing.—The *Uru* depend primarily on fishing (pl. 115, *top*), secondarily on hunting, in the waters and totora reed swamps of Lake Titicaca and the Río Desaguadero. The dry land they own is so restricted that they have little agriculture, although they have some livestock.

Fishing by moonlight is much favored. They frequently use a V-shaped weir made of reed bundles thrust into the mud of the swamp bottom, with a removable net at the opening of the V; the fish are driven into the converging fences by agitating the water with a bundle of reeds tied to a pole. The *Uru* also use three- and eight-pointed spears, but lack the bow and arrow. They have several kinds of nets. Large dip nets attached to a frame are handled by one fisherman; the netting is placed over a conical frame, the partially closed base of which is 10 ft. (3 m.) in diameter. Another framed net is rectangular, a scoop net with a pole handle. Bottom and dragnets also exist; these are weighted with perforated stones at the bottom, and require a number of persons to drag them behind several balsas. Small fish, salted and toasted, are carried and eaten dry on journeys. Larger varieties are salted, scaled, boned, and stretched out between stones in a slow, smoky fire; thus smoke-dried, they are preserved for periods of scarcity.

Hunting.—Hunting is next in importance to fishing. The river marshes abound in water hens, ducks, geese, loons, herons, various diving birds, and gulls, of which only the loon is not eaten, because of its rank oily flesh. A kind of red duck (pana-sohna) is most frequently hunted. Hunting methods are varied. The *Uru* are skillful with slings, which are woven and braided of varicolored llama and sheep wool. They also use bolas, which have two large wooden floats for balls and a small, grooved, ovoid stone for a handgrip. One use of disguises has been reported. Early in the morning a man conceals himself in a bunch of reeds, slowly approaches the birds which are still stupefied by the cold of the night, then, grabbing them by the feet, quickly kills them by biting the head or twisting the neck. In communal hunts, nets, sometimes hundreds of meters long, are set in slightly curved lines on reed supports. Hunters in balsas make a noisy drive and frighten the birds into the almost invisible nets and dispatch them with clubs. The *Uru* also eat the eggs of aquatic birds, and sun-dry strips of their flesh to make a kind of charqui.

They do little hunting of land animals, but they may lasso the head male of a herd of vicuña which has been driven from the heights by the cold of winter, then club the remainder of the herd.

Herding.—The *Uru* have a few livestock—sheep, cows, and occasional llamas—but these are restricted in number by the scant pasture on the mainland. The cattle are usually half-wild and forage in the swamps, eating the succulent reed stalks and roots. The *Uru* have dogs, guinea pigs, chickens, and pigs; the last are kept in mud sties or allowed to wander through the village.

Farming.—Maize will not grow in this infertile and cold region, which is more than 12,000 feet (3,600 m.) above sea level; but a few bitter potatoes and some quinoa are cultivated.

Food preparation.—The few potatoes cultivated are frozen and dried to make chuñu. Women grind quinoa with a long, flat, stone muller on a stone metate which slants outward from their laps, then toast it to make a nourishing powder (pitu). The succulent white root of the totora reed is eaten raw. Shrimplike crustaceans from the river are toasted.

Beer is made of quinoa and, when they can get it, of maize, which they chew into chicha.

Like all the altiplano peoples, the *Uru* chew coca.

HOUSES

Most *Uru* houses have an oval ground plan, but some are rectangular. The walls are built of rectangular turf blocks laid in horizontal courses, much as the ancient chullpas, or grave-houses, the outer wall often plastered with adobe. The entrance always faces east and is closed at night by a thick door made of bunches of totora reeds placed vertically and joined together at intervals by double horizontal cords in twined technique. The roof framework is of sticks or of reed bundles; the main ridge of the roof arches east and west, with stick or reed-bundle purlins resting on this ridge and the side walls. This framework is covered with reed mats (pl. 113, *top, left*)—single totora stalks twined at intervals with grass cord. Grass ropes are laid over the mats and tied to pegs in the outside wall. The fire in the mud stove to the right inside the door speedily coats the roof with soot and makes it waterproof. Greasebrush (tola), chunks of a woody semi-subterranean plant (yareta), and llama dung—in the absence of wood in this treeless region—serve as fuel. Some smaller *Uru* shelters have a corbeled turf dome instead of a frame with mat thatching. The Sojopaca *Uru* build temporary shelters of mud, "like beavers," similar to the domed houses of the islet of Simillaque. On the Isle of Panza there are round, stone-roofed houses.

DRESS AND ORNAMENTS

Anciently, it is said, the *Uru* went entirely nude, which is quite incredible in view of the bitterly cold winters in this region. The essential male costume is like the pre-Columbian *Chipaya* uncu—a sleeveless, sacklike garment made of an untailored textile, sewed partway up the sides with openings for the arms, and partway across the top with an opening for the neck. This is woven of llama yarn on a simple bar loom staked in the ground. Recently, most *Uru* males have adopted trousers of the *Aymara* style: short, with a slit at the heel, and tailored of native homespun after a Colonial pattern. The slit permits the trousers to be rolled up more easily when a man fishes from a balsa or wades in shallow water. Leather sandals are sometimes worn when traveling, but people usually go barefoot. A knit wool cap, with *Aymara*-style earflaps, is sometimes topped with a crude, *Aymara*-manufactured felt hat. A belt is sometimes worn, and occasionally a thick woolen poncho. Caps woven of bird feathers were known in ancient days.

Uru women wear black llama-wool skirts, girdled at the waist, and untailored bodices pinned at the top over each shoulder with a large-headed copper pin (tupu). When traveling in cold weather, the women wear woven woolen wimples over the head under the hat.

Women part their hair in the middle and wear it in two braids tied behind the back with vicuña-wool filets; only a few still wear the ancient style "Titicaca braids"—countless small braidlets all over the head. Women wash their hair in fermented human urine. *Uru* men wear their hair short in quasi-European fashion or in an all-around tropical bang.

BOATS

The *Uru* are famous balsa builders (pl. 115, *bottom*). Their craft, though actually rafts made of totora reeds, are shaped like boats and are highly navigable even in narrow, shallow swampways. The reeds are cut with knives attached to poles, then, after drying, are stacked in shocks like corn. Nearly every able-bodied *Uru* male has quantities of this material in all stages of preparation for balsas. During spare moments in their houses, they are continually braiding ichu grass into tough ropes to bind the reed bundles. The keel is formed of a long, thin, tubular bundle of reeds; and separately lashed to this keel are two thick, cigar-shaped pontoon-bundles. Each of these pontoons is built up of reeds so arranged as to be very thick in the middle of the boat and to have upturned points at each end. An acute-angled wooden tool with a groove inside one arm is used to tighten the binding. To keep out small waves, gunwales consisting of much thinner bundles of totora are lashed to the upper outside edge of the pontoons. The whole makes a sea-sled type of hull, which will not easily overturn even in the fierce storms of Lake Titicaca.

The balsa is poled along with a stubby trident, the wood for which comes from the yungas east of the Cordillera Real. In the open lake, a trapezoidal reed sail is rigged on two poles stuck deeply into the pontoons and forming an inverted V. The balsa is unable to tack in the wind, however, for it lacks a centerboard. Balsas are dragged onto the land from time to time lest they become waterlogged and rot. Though they may be bought for 10 to 16 Bolivian dollars (bolivianos), they represent much labor.

MANUFACTURES

Uru material culture is simple. Owing to the lack of trees, the giant totora reed (*Scirpus tatora*) is of extraordinary importance, providing material for fishweirs, roof mats (pl. 117, *top*, *left*), floor and sitting mats, rafters, doors, balsas, sails, and even food for animals and people. Metallurgy is unknown. Pottery making has been abandoned in recent times.

Basketry.—Crudely coiled baskets and twined tortora reed baskets are made.

Textiles.—The *Uru* make twine bird nets, mats of various types, sails, grass rope, and simple baskets (both coiled and twined). Women spin llama wool as incessantly as the men make grass rope, using a wooden spindle. They weave the yarn into cloth on a simple bar loom staked taut on the ground (pl. 116, *top*), rolling up the finished cloth on the end bar. When the end of the warp is approached, they weave from the other end, and finally fill in the last intermediate strip with a needle. Knitting is not pre-Columbian here, but *Uru* women are very skillful in knitting *Aymara*-type caps (gorros), often with amazingly intricate animal figures and other designs. Men's slingshots are very beautifully braided of wool with varicolored diamond designs like the markings on snakes. The *Uru* also make thongs of twisted rawhide still retaining the fur, and heavy braided woolen ropes for lashing loads on burden animals.

An extremely interesting textile, apparently unique to the region southeast of Lake Titicaca, is a kind of feather cloth described by David Forbes (1870). The down of lake birds was spun into thread, and then knit into caps and children's socks and gloves. Only a few specimens of these exist in museums.

Weapons.—To make bolas, the *Uru* buy cotton thread from traders and wind this tightly around a cord Y to make a durable bird-hunting weapon. A straw-cord bola perdida, similar to that of Patagonia, is also used.

Metals.—The *Uru* know no metallurgy, although the *Aymara* of Jesús de Machaca, scarcely a day's journey away, are famous for their metal casting. Some of the pins (tupus) which women use to fasten their clothing at the shoulder, are probably generations old, perhaps having been taken from chullpa graves. All other metal objects are obtained by trade.

Pottery.—Although not now made at Ancoaqui, pottery was formerly produced in simple styles: a plain reddish, round-bodied olla with a narrow neck and handle, and a large, crude hemispherical bowl with a bent-out lip and two loop handles.

Stonework.—Metates, mullers, and hammers made of a round stone lashed with rawhide to a stick, the small hand stones of bolas, and fish-net sinkers are the only objects made of stone.

Woodworking.—Weaving frames, distaffs and spindles, balsa poles, spear handles, hooks for tightening balsa lashings, and a few other articles compose the list of wooden objects. Wood is a valuable substance in this treeless region, procurable only by trade or travel to the yungas.

Musical instruments.—All *Uru* musical instruments are duplicates of those of the *Aymara:* the open-ended flutes (palawatu, kena, pusipia, and kenakena), flageolets (kena mari-macho, koiko, pinkilu, and tarka), double panpipes, i.e., in two graduated rows (siku, sikuchoklo), and the drum. No stringed instruments are present except the armadillo-carapace ukelele or charanga.

ECONOMICS

The only *Uru* articles of commerce are dried and salted fish, balsas, and the large totora reed mats which they make for Bolivian cholo huts. They exchange these for frozen and dried potatoes (chuñu), coca, thread to make nets, quinoa, wooden poles, metal objects, and other indispensable goods like medicines and dyes.

The sexual division of labor is simple: men fish, hunt, make and repair nets, and manufacture balsas, mats, musical instruments, and their own tools; women spin and weave llama wool, cook, and make baskets and, formerly, pottery. Women trade all goods except balsas.

SOCIAL AND POLITICAL ORGANIZATION

Not much remains of pre-Columbian *Uru* social structure, for a scattered and diminishing population has not been able to preserve it functioning. The *Uru* are grouped into ayllus, named Titicana, Konko, Kama, and Kuipa, and their territory is physically divided into nonexogamous moieties: ti achai (corresponding to *Inca* anansaya), and xanacha (*Inca* mana-saya). The kinship system is fragmentary, and highly descriptive in its present, perhaps, degenerate form. It is apparently a bilateral system which does not distinguish between paternal and maternal uncle, or aunt, or grandparent. Like the *Aymara*, the *Uru* distinguish siblings terminologically according to age.

Marriage is now solemnized, if at all, with a Catholic ritual led by a priest who yearly visits the village. There is a tradition that formerly couples were married while standing back to back in the water of the lake. Postmarital residence is patrilocal. Although Polo (1901) states that the *Uru* were formerly endogamous, a shortage of women during recent years has led men to take *Aymara* wives.

If the *Uru* ever had a tribal chieftain, he has long since been forgotten. Today, they have the typical altiplano native hilakata, or alcalde, appointed or elected yearly. Squabbles with *Aymara* neighbors are led by this official.

RELIGION

The *Uru* worship Pachamama, the earth goddess, and perhaps also a place-deity of the swamp, although they are nominally Catholic and have a small mud church in their village. Like the *Aymara*, they believe in dream interpretation, in meteorological signs, and in taking omens. Their sacrifices of alcohol, coca leaves, and animals to their deities are very like those of the *Aymara*. Bertonio (1879 b), however, lists several ancient *Uru* dances which have disappeared since the 17th century: the huchhu or sisa quirkitha, and the chiy-chiy, in which bags are held in the hand.

The main *Uru* fiesta is at the vernal equinox, but has been changed from the 23d to the 14th of September to coincide with the Christian feast of the Exaltation. On this date, they blow panpipes (siku), sing and dance the mimule, and perform the ancient rite of blood-sacrifice (wilancha) by slaughtering a llama and smearing the blood near the entrance of each hut. Most of the *Uru* beliefs and ceremonies are clearly from the *Aymara*.

Most *Uru-Chipaya* folklore is similarly of the common *Aymara* stock of animal tricksters.

THE CHIPAYA

The *Chipaya* of Carangas (Bolivia) are linguistically identical with the *Uru* of the Río Desaguadero but differ somewhat from them in culture, though retaining in common certain ancient features. Whereas the *Uru* are chiefly a fishing and hunting people, the *Chipaya* are chiefly pastoral and practice a little agriculture.

CULTURE

SUBSISTENCE ACTIVITIES

The *Chipaya*, like many pastoral peoples, dislike to kill their animals, and they eat llama flesh only when these are ritually slaughtered at public fiestas or important private rites. Curiously, the *Chipaya* do

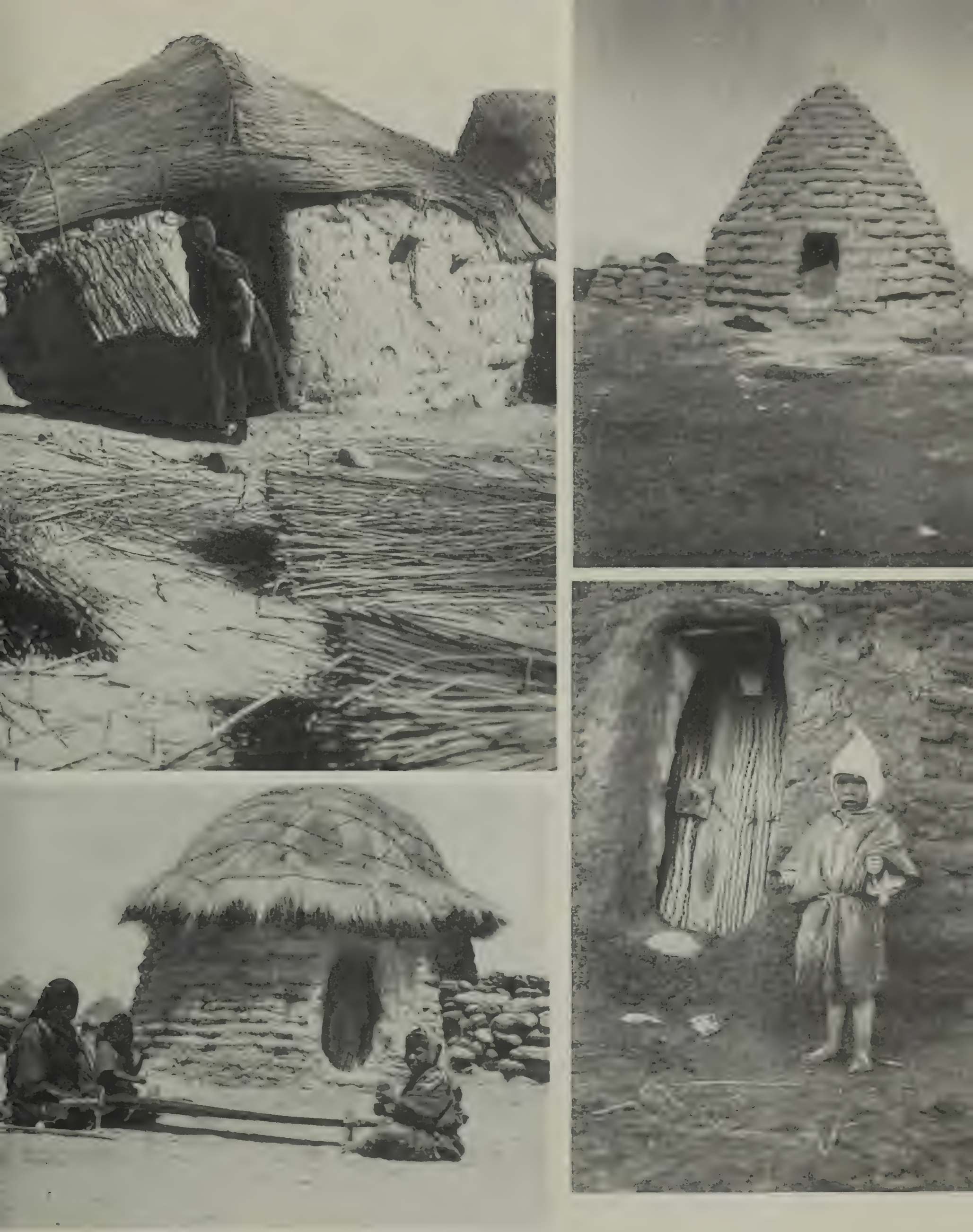


Plate 113.—**Uru and Chipaya houses.** *Top (left): Uru* mat-covered house. *Top (right): Chipaya* sod house. *Bottom (left): Uru* house. Weavers in foreground. *Bottom (right):* Door of a *Chipaya* sod house. (Courtesy Alfred Métraux.)

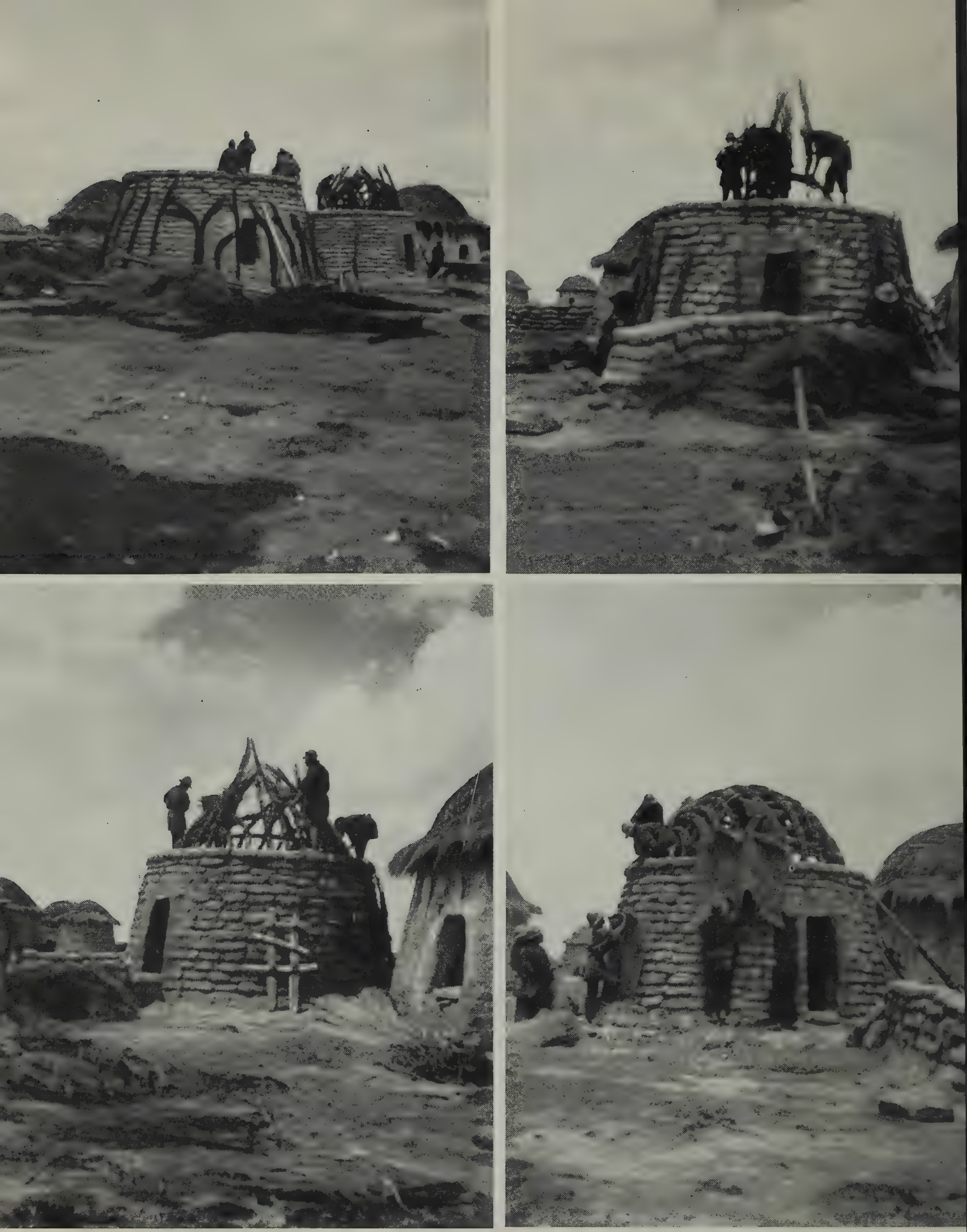


PLATE 114.—**Roofing a Chipaya house, Carangas, Bolivia.** (Courtesy Alfred Métraux.)

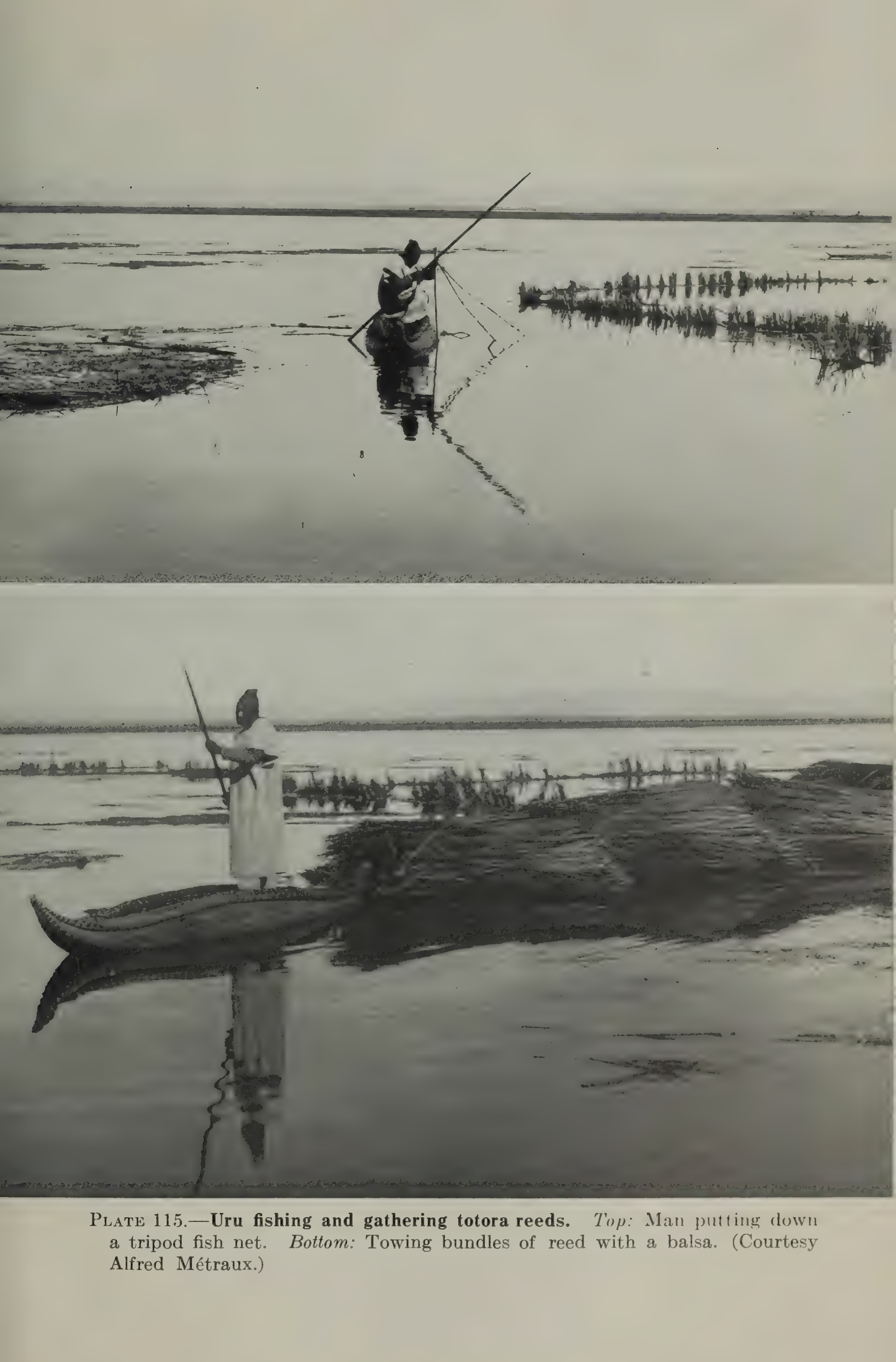


PLATE 115.—**Uru fishing and gathering totora reeds.** *Top:* Man putting down a tripod fish net. *Bottom:* Towing bundles of reed with a balsa. (Courtesy Alfred Métraux.)

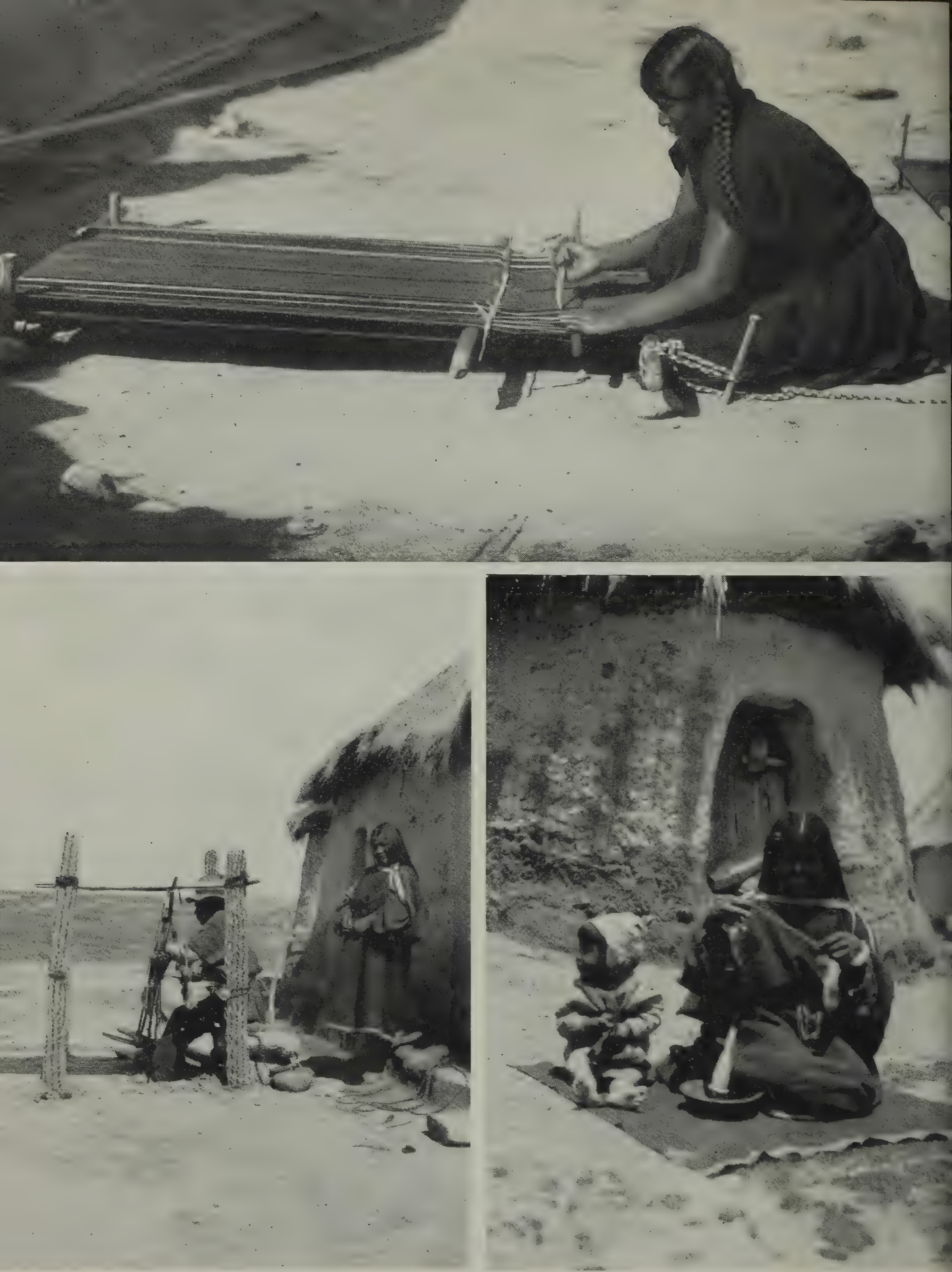


PLATE 116.—**Uru and Chipaya weaving and spinning.** *Top: Uru* woman working at native loom. *Bottom (left): Chipaya* man at upright loom. *Bottom (right): Chipaya* woman spinning. (Courtesy Alfred Métraux.)

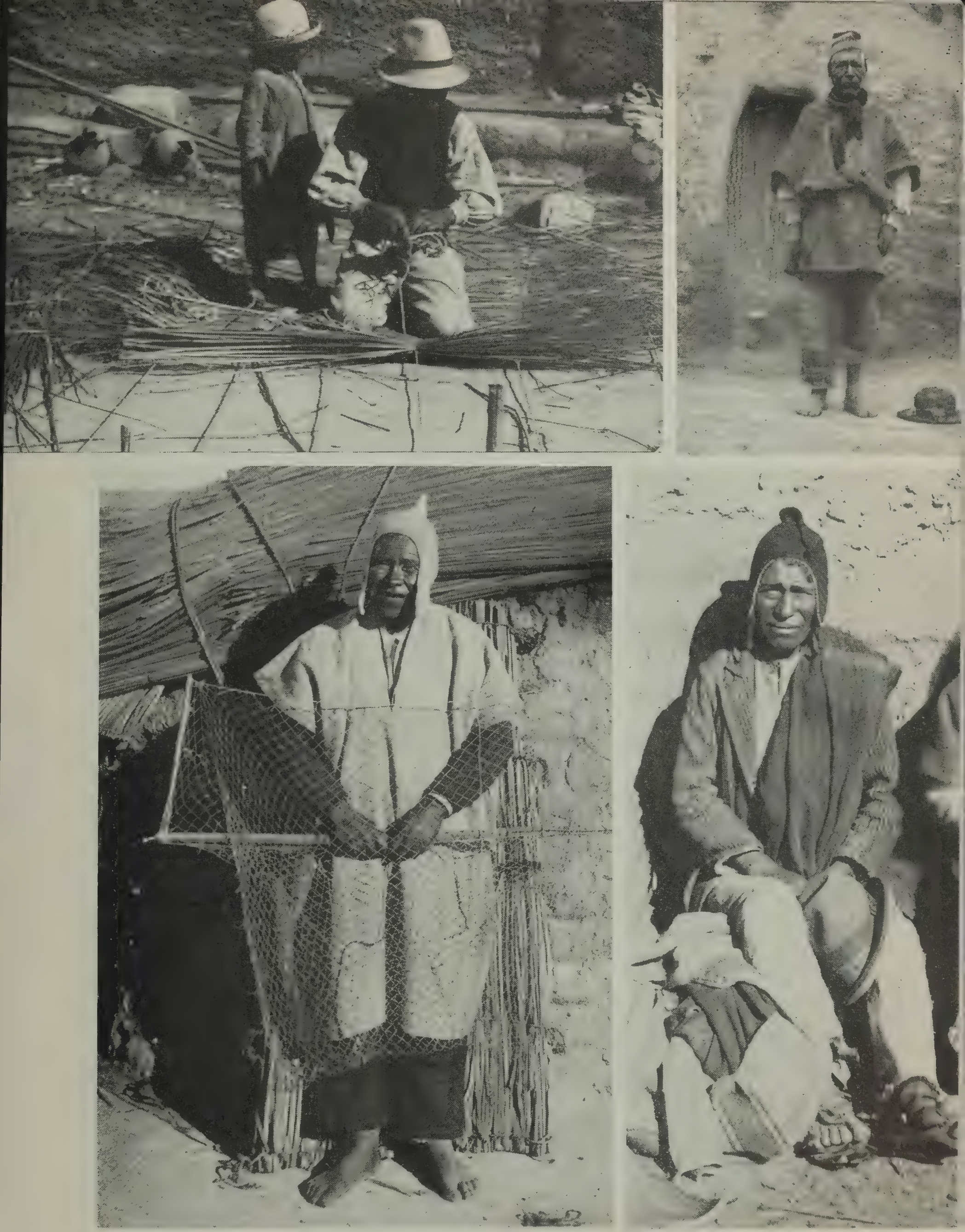
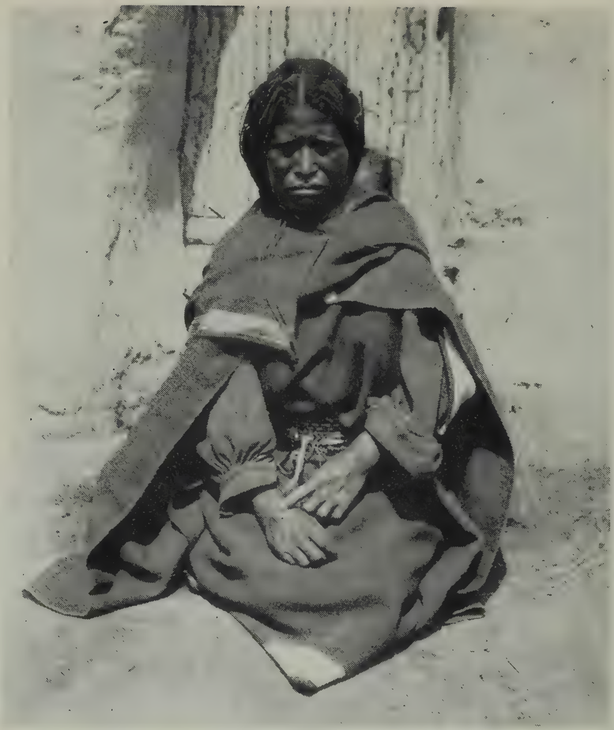


PLATE 117.—**Uru and Chipaya Indians.** *Top* (*left*): *Uru* man making a mat. *Top* (*right*): *Chipaya* man. *Bottom* (*left*): *Uru* man holding a fishing net. *Bottom* (*right*): *Uru* man. (Courtesy Alfred Métraux.)



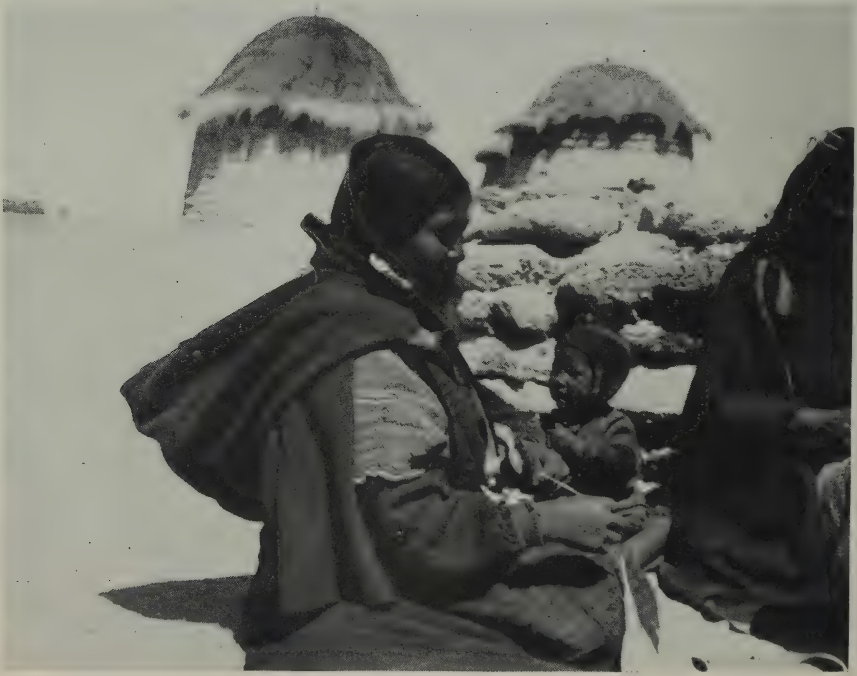


Plate 118.—**Chipaya women.** (Courtesy Alfred Métraux.)

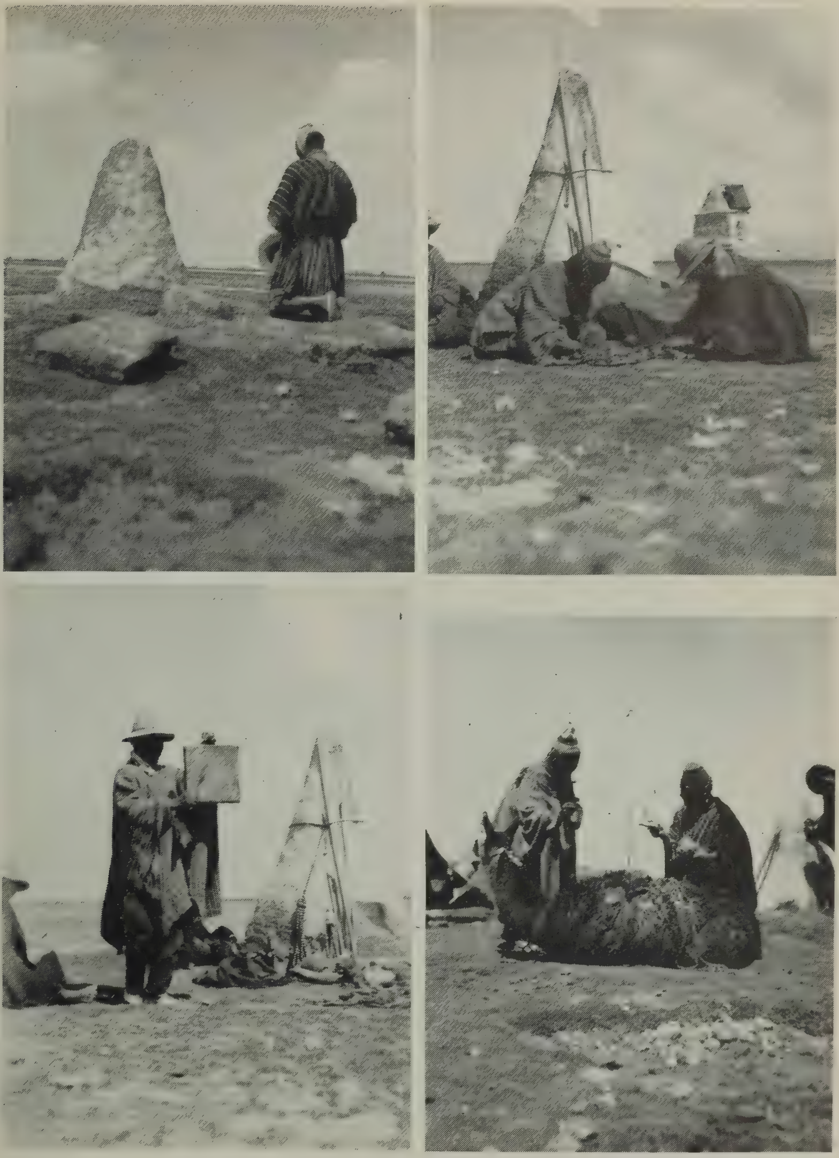


Plate 119.—**Chipaya sacrificial rites.**

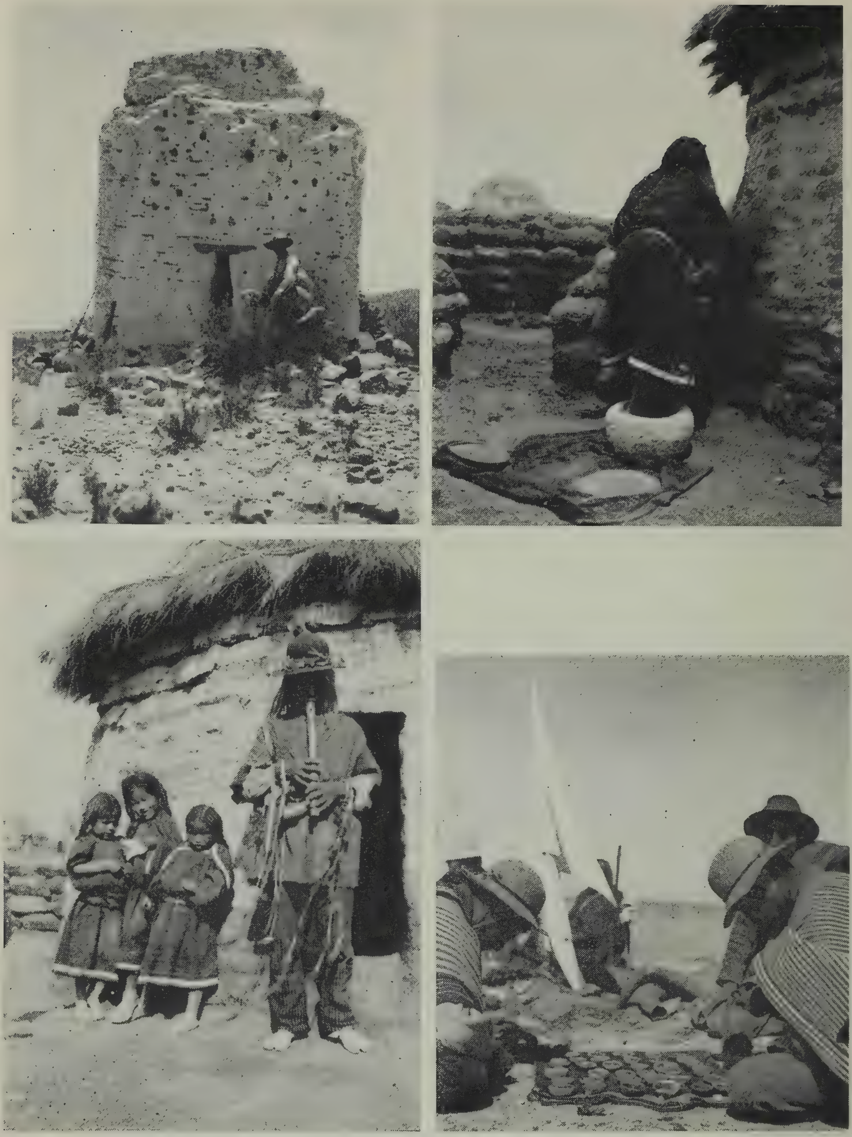


PLATE 120.—**Chipaya country and Chipaya Indians.** *Top* (*left*): Chullpa, or ancient burial tower. *Top* (*right*): Woman shelling with feet. *Bottom* (*left*): Dancer. *Bottom* (*right*): Playing a game. (Courtesy Alfred Métraux.)

not raise guinea pigs, as do most of the altiplano tribes, and have only a few chickens. Their primitive agriculture is limited to the cultivation of a little quinoa on the tribally owned lands which are distributed yearly by the mayor to families at the fiesta of San Andrés (November 30). Their principal industry and chief source of wealth is cheese made of sheep milk. The *Chipaya* eat a number of wild tubers and occasionally hunt vicuñas and small rodents.

SOCIAL AND POLITICAL ORGANIZATION

About 1930 there were some 350 *Chipaya* in Carangas, which was physically divided into nonexogamous moieties, called "East" and 'West," each with its own mayor. The moieties form rival and very antagonistic groups. They fight each other on occasion and kill each other's pigs and sheep for trespassing. The *Chipaya* kinship system, like that of the *Uru,* is much influenced by the *Aymara.* Descent is patrilineal, and residence patrilocal for a year or until the birth of the first child or two. All *Chipaya,* without exception, are bilingual and speak *Aymara* fluently; indeed, ordinarily they speak *Uru* only among themselves at home.

Their music and folklore are entirely *Aymarized.*

RELIGION

The religion of the *Chipaya* does not differ from that of the *Aymara* of the same region. Some rites, however, may have been better preserved among the *Chipaya* than in communities more open to outside influences.

Chipaya religion is a blend of pagan and Christian beliefs and practices, with a strong predominance of the former.

The main *Chipaya* deities, to whom they render a public cult, are the Saints (San Felipe, Jerónimo, and Santa Ana, the protector of the village), the Earth Mother, Pachamama, who is often confused with the Virgin Mary, a host of spirits (maλku) with little individuality (Chunkirini-maλku, Kemperani-maλku, Estewan-maλku), the mountains seen from the village (among them, Nevada de Sajama), the Llauca River, and the tower of the church (Torre-maλku). The samiri are sacred stone fetishes on which the prosperity of the village hinges.

Family houses are protected by a spirit (patio-maλku), represented by stuffed spotted cats or hawks, which are worshiped only by the members of the household.

Public cults.—The most important *Chipaya* deity is Pachamama, or Earth Mother. She is not worshiped on a special date, like the maλkus and saints, but is associated with every *Chipaya* ceremony, public or private. She is invoked in most prayers and is offered coca, libations of chicha, and grease balls decorated with plants and silver paper. Llama foetuses are burned in her honor, and whenever an Indian drinks he makes a libation for her. At the end of a feast, the Indians kiss the earth to show their devotion to her.

The maλku, next in importance, are represented by whitewashed cones of sod 3 to 4½ feet (1 to 1.50 m.) tall, set on low platforms in isolated and secret spots about 10 miles from the village. Each moiety has its own maλku which are worshiped on fixed dates.

The moiety samiri are calcareous stones of irregular shape which are kept in a stone-lined pit in the desert, hidden under a yareta plant.

The cult of the maλku and that of the samiri follow the same pattern.

Every feast is sponsored by an alférez and his wife, who are the masters of ceremony. The high point is the sacrifice of the three animals on which the *Chipaya* depend for their subsistence: a llama, a sheep, and a pig. The officiating priest is a yatiri—a man who knows the religious prayers and how to prepare the libations to be offered. The blood of the victims is mixed with flours made of various kinds of maize and cast to the four directions. What is left is poured on the cones or samiri stones.

The libations are prepared in small cupulae and in small bottles, which are lined up in a set order. Their formulae are complicated and include a great many magic ingredients (chicha, "sevarios," that is, mineral powders of various colors, herbs, turquoise beads, gold and silver paper, etc.). The content of each cupula is poured separately with prayers to the Saints, the maλku, and Pachamama. Grease balls, with plants stuck in them, and candies are buried for Pachamama. Khoa, an odiferous resinous plant, is burned in special incense burners. Other objects such as grass bundles decorated with ceremonial slings, eggs, wreaths made of sliced fruits, and bread and cheese are displayed by the alférez and carried during the dances. The prayers and the material symbols always express the longing for fertility, for water, and for the multiplication of the herds. The prayers, though directed to pagan deities, are often strongly marked by Christian elements. The day after a feast there is always a communal meal in the village during which the sacrificed animals are consumed and prayers recited.

Carnival is also a very important pagan feast celebrated jointly by the two moieties. The desired fertility is symbolized by huge wreaths of fruits and cheese hung from the church's towers and by the outfit of the dancers, who carry bundles of fresh grass, strings of blown eggs, dead ducks, stuffed vicuñas, and other objects. Dances to the sound of quenas accompany every feast.

Private cults.—When a house is built, a sheep is sacrificed and its blood sprinkled against the walls and roof. On certain occasions, such as the return to the village after a long absence, a sheep is sacrificed to the house spirits, and a cup of blood is presented with all kinds of offerings and decorations to the stuffed cat, which is kept in a corner.

The herds of each family are protected by a special samiri—a stuffed sheep buried ritually in a corral together with offerings of blood, herbs, and coca, and with a box containing images of sheep made of grease, mineral powders, flowers, sweets, and several other magical substances.

Whenever an animal is slaughtered for food, a short ceremony takes place with offerings of coca and chicha. The head is placed on an improvised altar decorated with flowers, on which they also place coca and the cupulae with the sacred mixture. The natives salute the head, offer it coca, and pour a few drops of chicha or alcohol in its honor.

After shearing the llamas and sheep, the *Chipaya* make libations on the wool and offer coca and chicha to small clay images of sheep and llamas. These images are also deposited on Christmas Eve on the church's main altar.

Shamanism.—Certain diseases attributed to supernatural causes are treated by the yatiri. He makes the usual libations and offerings, and kills a sheep by pulling out its heart, which is placed on the ailing region of the patient's body.

Divination is practiced by the examination of a bunch of coca leaves.

FOLKLORE

Chipaya folklore is essentially the same as that of the *Aymara.* The tales collected by Métraux (1935 c, pp. 395–415) deal with the misfortunes of Fox, the trickster, who is fooled by Condor and Duck. The motifs of the magic pregnancy and of the miraculous recognition of the unknown father which form part of the myth of Coniraya, recorded by Francisco Davila, in Huarochiri, occur also in a *Chipaya* tale. Other elements of the same tale show close relationship with *Chiriguano* folklore. The *Chipaya* represent themselves as the last survivors of the chullpa people who have been exterminated by the Sun, an obvious survival of the myth of the destruction of mankind as told in the ancient Andean mythology.

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PART 3. THE SOUTHERN ANDES

THE CULTURAL SEQUENCE OF THE NORTH CHILEAN COAST

By JUNIUS B. BIRD

ENVIRONMENT

North Chile, generally considered as the portion lying between lat. 18° and 30°30′ S., from Arica to a little south of Coquimbo, is one of the most satisfactory areas in South America from an archeologist's point of view (map 1, *No. 7*).

Given the time and means, there is little information about the former inhabitants, except their language, folklore, and social organization, which could not be recovered. As in the desert portions of Perú, normally perishable material is remarkably preserved; but, in contrast to Perú, many sites, at least those on the Coast, provide sequences back into early preceramic days. The explanation lies in the topography, climate, and other factors controlling the native life.

Variations of climate provide the basis for separating the Coast of North Chile into two sections, the dividing point being not far north of Taltal. In the northern portion, which is on record as the driest desert in the world, nonagricultural people were almost entirely dependent on the sea for food and for much of their fuel, especially dried kelp. The Coast line is washed by heavy seas and holds few protected portions. Sandy beaches are rare and, in rough weather, no shellfish can be gathered on them. Hence, the preferred camps were generally found along the infrequent bits of somewhat sheltered rocky shore, where shellfish could be secured and handline fishing carried on when heavy surf prevented food gathering elsewhere. Coast residents were further limited in their choice of sites by the scarcity of drinking water, which is found only in the few narrow valleys carrying the drainage from the flanks of the Cordillera.

These valleys provided little more than water and a limited amount of wood. With the introduction of agriculture, some of them supported inland populations, but none afforded large areas for farming. Nor did the available water supply permit extensive irrigation, as in Perú. Thus, we find that sea food was of continued importance up to historic times, so that many of the old sites have unusually complete records of more or less continuous occupation.

In the southern portion of the area, the desert Coast is fringed by a belt of vegetation which increases in width to the south. This vegetation is sufficient to support a limited number of guanacos, so that nonagricultural people could supplement sea food with land game in an increasing degree southward. The water supply, too, is more generally distributed and is not restricted to the major drainage systems. The preferred locations on the shore were the same as to the north, but one sees more small camps, while the principal ones have smaller deposits of refuse. In further contrast to the North Coast and the inland desert, perishable items are lacking from the deposits and graves. Agriculture was still limited to the drainage systems, for it is only south of Coquimbo that even such modern crops as wheat can be raised on unirrigated land.

Areas of sparse vegetation border the eastern side of the northern desert and lie on the flanks of the Cordillera. Portions have been farmed by the Indians. Except for the agricultural period, little is known of the archeological sequences.

ARCHEOLOGY

Although archeological material has been gathered in North Chile for many years, serious investigation has been limited to the work of Latcham and Uhle. Both worked principally in the cemeteries. Recent work has secured additional data from the midden deposits of the Coast, the results of which have been published by the American Museum of Natural History (Bird, 1943). In some respects, the conclusions reached differ from those formulated after the earlier investigations. (See fig. 49.)

First preagricultural period.—Arica, Pisagua, and Taltal middens show a common culture at the bottom. This is characterized by the use of shell fishhooks; composite fishhooks, consisting of weights of either stone, shell, or bone to which are lashed bone barbs (pl. 127, *a*)[1]; harpoons for sea mammals with detachable forepieces fitted with bone barbs and stone points of a simple double-ended form (pl. 123, *m*); and mortarlike lava bowls (pl. 127, *b*). With these are ordinary stone sidescrapers, both single- and double-edged, and coarse percussion-

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[1] *Explanation of Plate 127:*

Prehistoric artifacts from North Chile. *a*, Composite fishhook with stone weight and bone point of the "shell fishhook period," from La Lisera, Arica. (Length 4⅛ inches (10.5cm.).) (Courtesy Museum of the American Indian, Heye Foundation.) *b*, Lava bowl of the "shell fishhook period." These bowls continue into the second pre-pottery period of the region. From Tiltil, near Valparaiso. (Diameter 7⅛ inches (18 cm.).) (Courtesy the Convento de las Mercedes, Santiago.) *c*, Basketry hat covered by feather plume. Colors of the basket are black, white, red, khaki, and tan. The feathers are loosely stitched together and sewed to a cord passing through a hole in the top. From a mummy at Caleta Vitor (ca. 1578). *d*, Basketry hat in colors of red, white, blue, tan, and green. The rhea feather plume, now incomplete, may originally have drooped down about the hat. From near Pica. (Height, exclusive of plume: 5 inches (12.7 cm.).) (Courtesy American Museum of Natural History.)

ERS

Gut water bags	Scotum pouches	Small wooden containers	Calabash bowls
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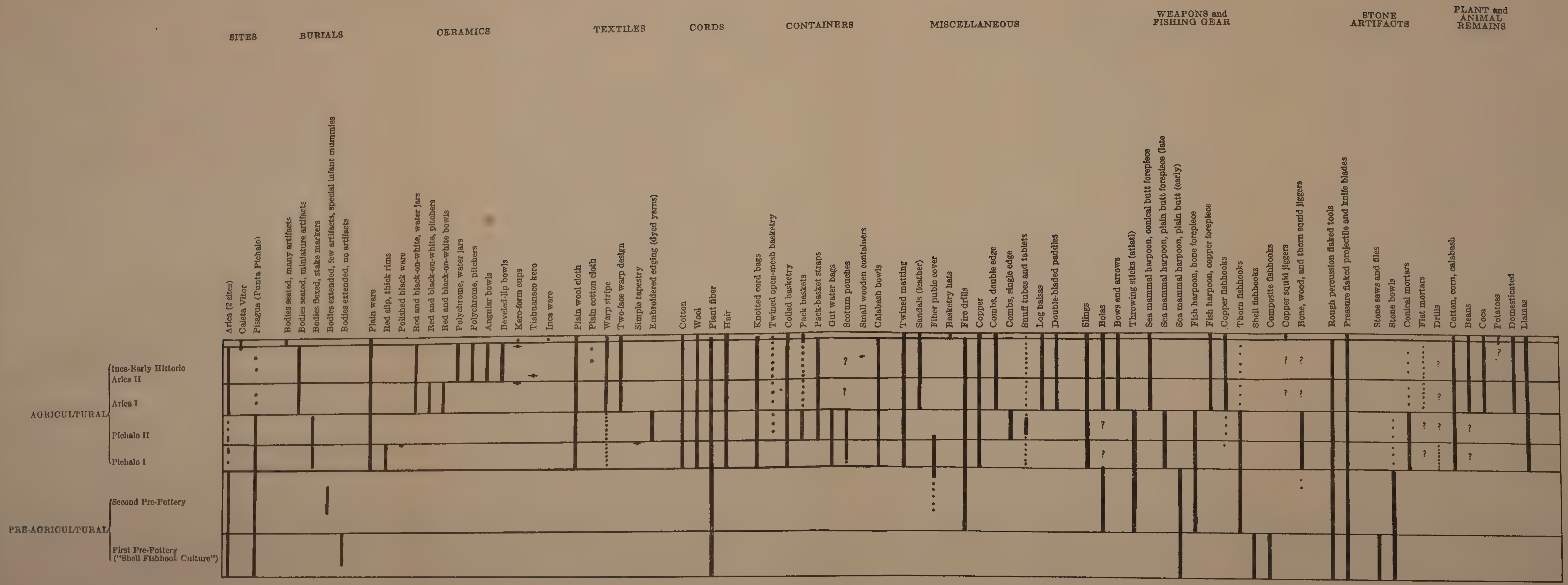

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FIGURE 49.—Chart showing presence and continuity of North Chilean culture traits. The heavy vertical lines indicate the length of occupation of sites and the life spans of the various traits. The horizontal lines mark the periods of the North Chilean cultural development. Vertical measurements are estimated on relative depths of cultural deposits.

flaked stone tools. These last are the most widespread artifacts on the Chilean Coast and continued in use to very late times in spite of radical cultural changes.

An even wider distribution of this early culture is suggested by the discovery of one of the lava bowls at Tiltil, between Santiago and Valparaiso, and one of the composite hooks at Llolleo, south of Valparaiso. At Arica, the refuse of this period forms only a small percentage of the total, while at Taltal it constitutes the bulk of the middens.

Second preagricultural period.—Above this Early Period at Arica and Pisagua is the Second Prepottery Period characterized by bone fish-harpoon forepieces or points (pl. 123, *c*, *d*)[2]; barbs and points for sealing harpoons, which are of a different pattern from that used earlier; thorn instead of shell fishhooks; cigar-shaped fishline sinkers (pl. 123, *g*); and bolas weights, some duplicating the earliest forms found near the Straits of Magellan (Bird, 1938, fig. 25, No. 7, p. 273). Among chipped-stone artifacts, triangular points with concave base predominate, although a barbed and narrow-stemmed point, possibly for arrows, is nearly as abundant. Surviving elements from the Early Period are the double-ended points, lava bowls, and coarse, percussion-flaked stone tools. In either this or the Early Period, if not in both, throwing sticks were used. The remains of this period are most clearly seen at Arica and Pisagua, whereas at Taltal it is marked only by a negligible amount of refuse and by certain items which, like the bone fish-harpoon forepiece, are modified.

Agricultural Period.—In the succeeding period (Arica I and II), coiled basketry, pottery (pls. 121,[3] 122), weaving, and agriculture appear simultaneously. Grave finds had suggested an early agricultural stage with coiled basketry and weaving but without pottery, paralleling the Basket Maker culture of the Southwestern United States; but data from the middens failed to support this sequence.

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[2] *Explanation of Plate 123:*

Fishing and hunting equipment, North Chilean Coast. *a*, Fish harpoon with copper point and rawhide line, probably post-Spanish, from Caleta Vitor; *b*, fish-harpoon point of copper, from Arica; *c*, *d*, fish-harpoon points of bone with thorn barbs, prototype of copper form, from Arica-Taltal area; *e*, large copper hook with rawhide leader and cotton line, from Arica; *f*, large copper hook, from Arica; *g*, stone fishline sinker with cord fastened to projecting knob, from Arica; *h*, fishline of cotton with stone sinker and copper hook, from Caleta Vitor; *i*, squid hook or jigger of copper, from Caleta Vitor; *j*, sea lion harpoon with stone blade and iron barb from Caleta Vitor; *k*, harpoon forepiece, conical butt, copper barb, and stone point, from Arica-Taltal area; *l*, harpoon forepiece quiver holding 7 conical butt forepieces (the type associated with Arica I and II pottery), from Arica; *m*, harpoon forepiece (the stone-point type associated with the "shell-fishhook" culture), from Arica-Taltal area; *n*, harpoon forepiece with bone barb and slot for triangular blade, from Arica-Taltal area; *o*, harpoon forepiece complete (barb type associated with Pichalo I pottery and the stake-marked burials), from Puntas Tetas, near Antofagasta; *p*, harpoon forepiece with point and barb formed of single bone, from southern Perú (?); *q*, harpoon forepiece with sharpened end, instead of separate point, and barb of bone (the type associated with Pichalo I pottery), from southern Perú (?). (Scale: *a* is 44 inches [1.14 m.] long.) (Courtesy American Museum of Natural History.)

[3] *Explanation of Plate 121:*

Arica I and Arica II pottery from North Chile. *a–f*, Arica I style, black and red on white; *e*, an unusual elliptical form painted only on side shown. (Respective heights: 9⅞ inches (25 cm.); 5½ inches (14 cm.); 5 inches (12.7 cm.); 4⅜ inches (11 cm.); 4¼ (10.6 cm.); 2¾ inches (7 cm.).) *g–k*, Arica II style, red, black, and white on reddish-buff. (Respective heights: 4¼ inches (10.6 cm.); 3¼ inches (8.3 cm.); 5¼ inches (14 cm.); 4¾ inches (12 cm.); 3½ inches (9 cm.).) (*b*, *c*, *e*, *g*, *h*, Courtesy American Museum of Natural History; others courtesy Museo de Historia Nacional, Santiago.)

Maize, calabashes, and cotton appear together; beans are perhaps slightly later. Potatoes are rare and were found only in a late grave. Coca may antedate potatoes but does not seem to have been used by the first farmers.

Textiles (pls. 126, 128) of this period are almost exclusively of wool, cotton being used principally for fishlines and perhaps spun with special spindles with rectangular whorls that appear in men's graves. Other spinning and weaving appear to have been done by women. Dyes, at first rarely used, included bright red, green, and blue, with a variety of intermediate shades. Warp-stripe cloth is common, the most intricate technique being that used to make warp designs. Tapestry is rare and used only for the most simple, elementary patterns. Embroidery is likewise rare, and, like tapestry, seems to be limited in distribution.

Sherd series from the Coastal middens fail to corroborate the idea that pottery was introduced into North Chile by the Tiahuanaco. In fact, at Arica and Pisagua, the rare Tiahuanaco pieces are exotic to the general pattern and occur considerably after the first pottery. Their influence is most apparent in the interior of the Provinces of Antofagasta and northern Atacama. The later *Inca* influence seems to have followed the same geographical route but extended much farther to the south. It was interrupted by the Spanish Conquest before it had made much impression on the established ceramic forms and designs. Along the coasts of the Provinces of Tarapacá and Antofagasta, painted pottery seems to have spread southward from Perú, for designs and forms known from Arequipa are found in diminishing frequency down to Taltal, where sherds occur only on the surface of the middens. The bulk of this ware is a type described as Chincha-*Atacameño,* though designs thought to be exclusively *Atacameño,* are mixed with it throughout. There is even some reason to question the use of the term Chincha in referring to this influence from Perú. Typical Chincha forms are lacking and Chincha designs have no close parallels in Chile. Closest are certain pieces of the ceramics designated in Perú as Churajón style (Kroeber, 1944, fig. 3, B; pls. 1, D; 2, E). These are identical with what we here refer to as Arica I and have not been reported north of Arequipa. Judging from the evidence found at Arica, the present conception of Churajón style may have to be modified, as certain differences in the group now called Curajón seem to parallel the changes which occurred in the course of time at Arica.

Although this ware is the oldest found at Arica, material from Pisagua suggests that it was preceded by a simpler, unpainted pottery

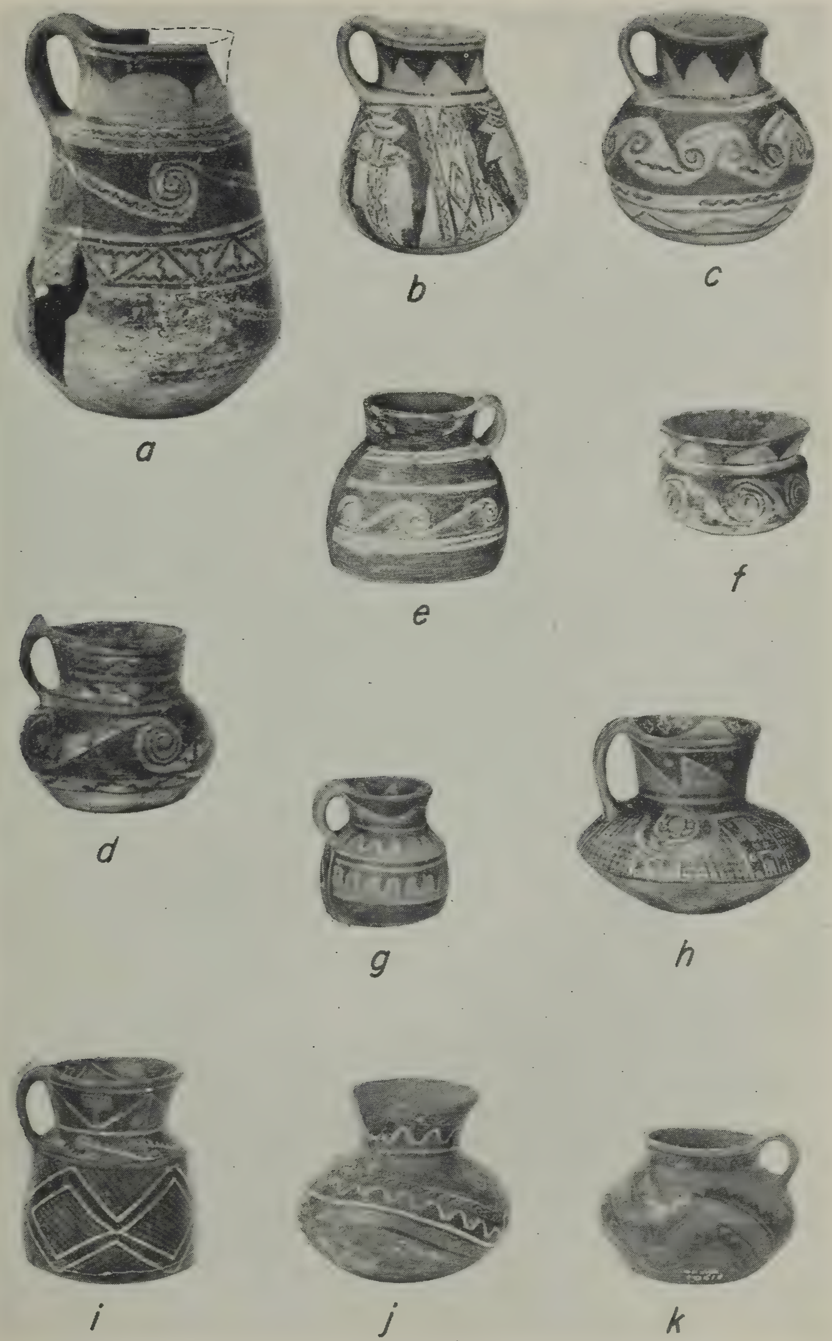
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Plate 121.—**Arica I and Arica II pottery from North Chile.**
(For explanation, see footnote, p. 589.)

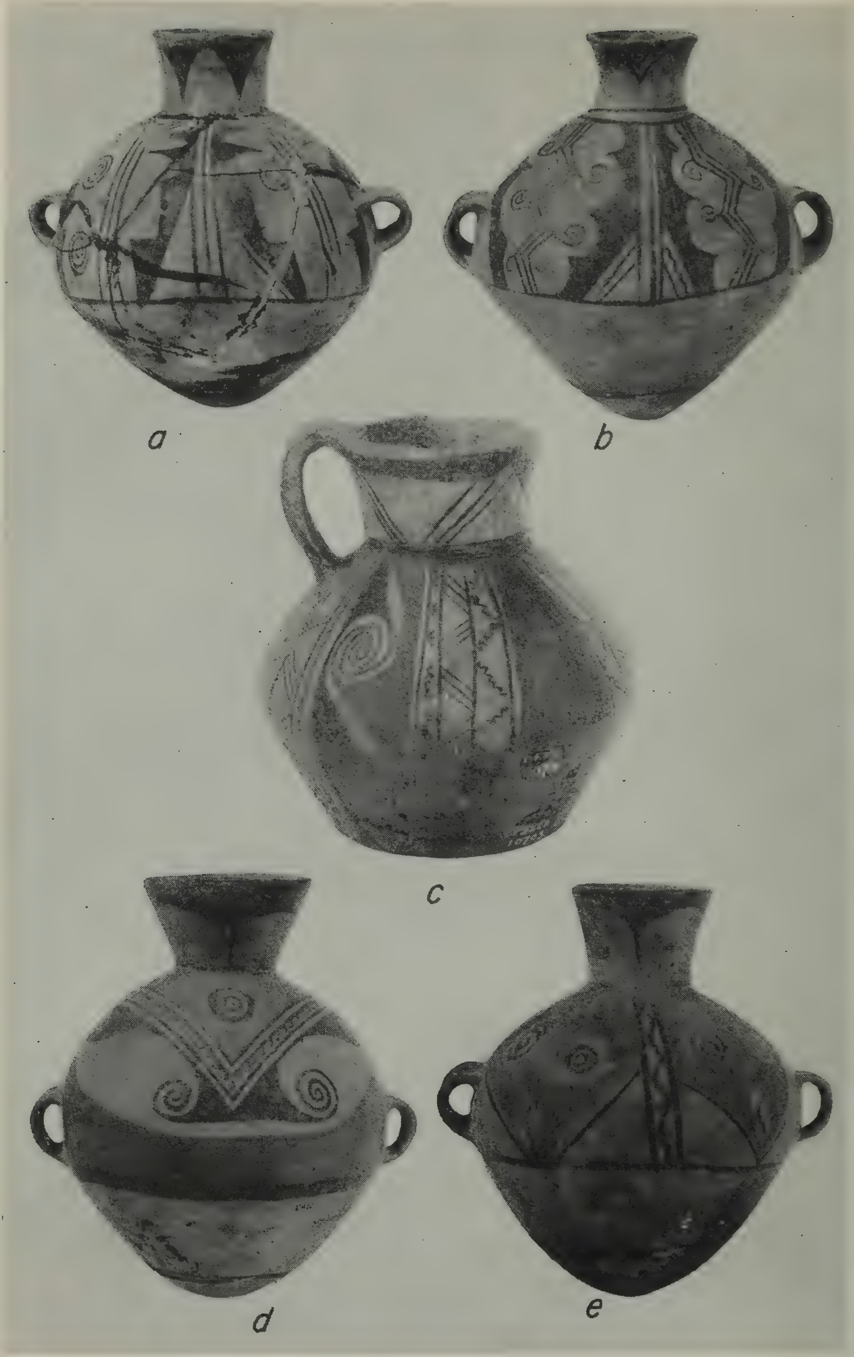

PLATE 122.—**Arica I and Arica II pottery from North Chile.** *a–c,* Arica I style, black and red on white. (Respective heights: 14¼ inches (36 cm.); 14¼ inches (36 cm.); and 7⅛ inches (18 cm.).) *d, e,* Arica II style, red and black on reddish buff. (Respective heights: 15⅜ inches (39 cm.) and 10⅝ inches (27 cm.).) (Courtesy Museo de Historia Nacional, Santiago.)

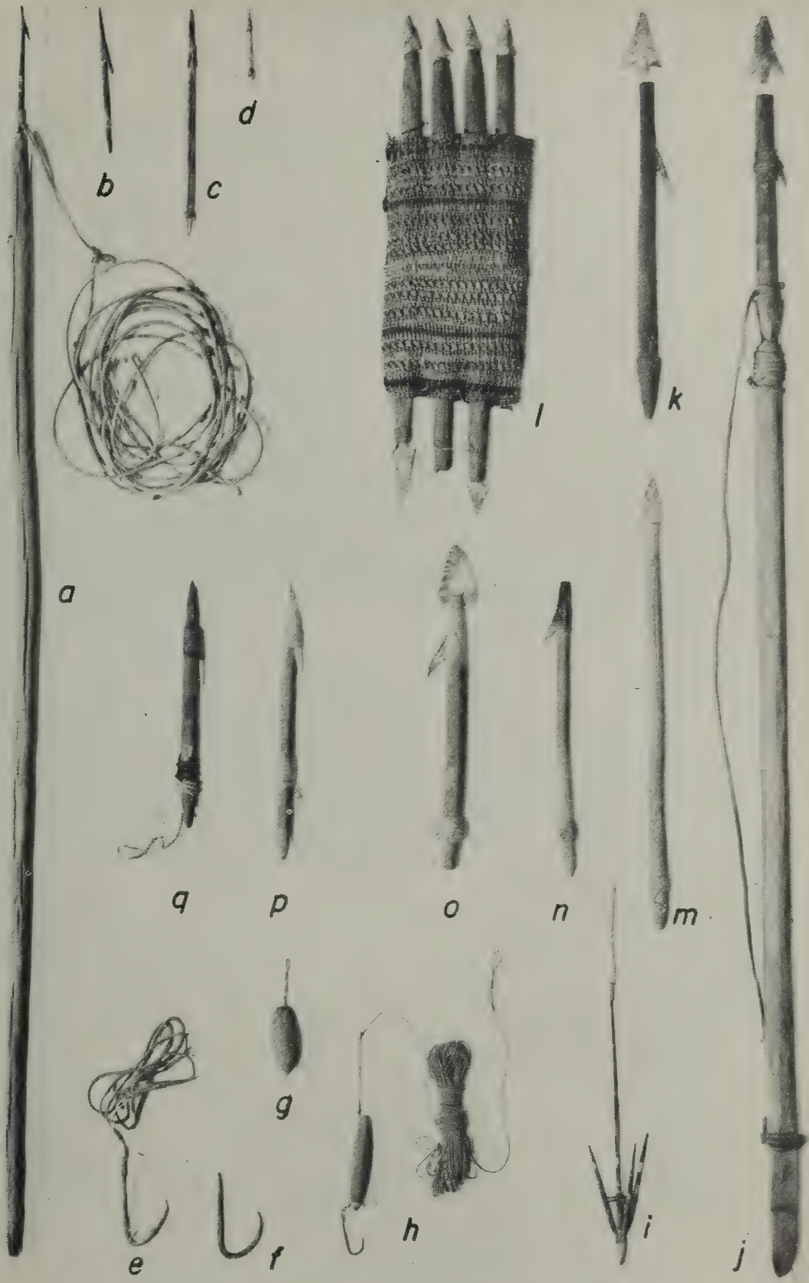
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PLATE 123.—**Fishing and hunting equipment, North Chilean Coast.**
(For explanation, see footnote, p. 589.)

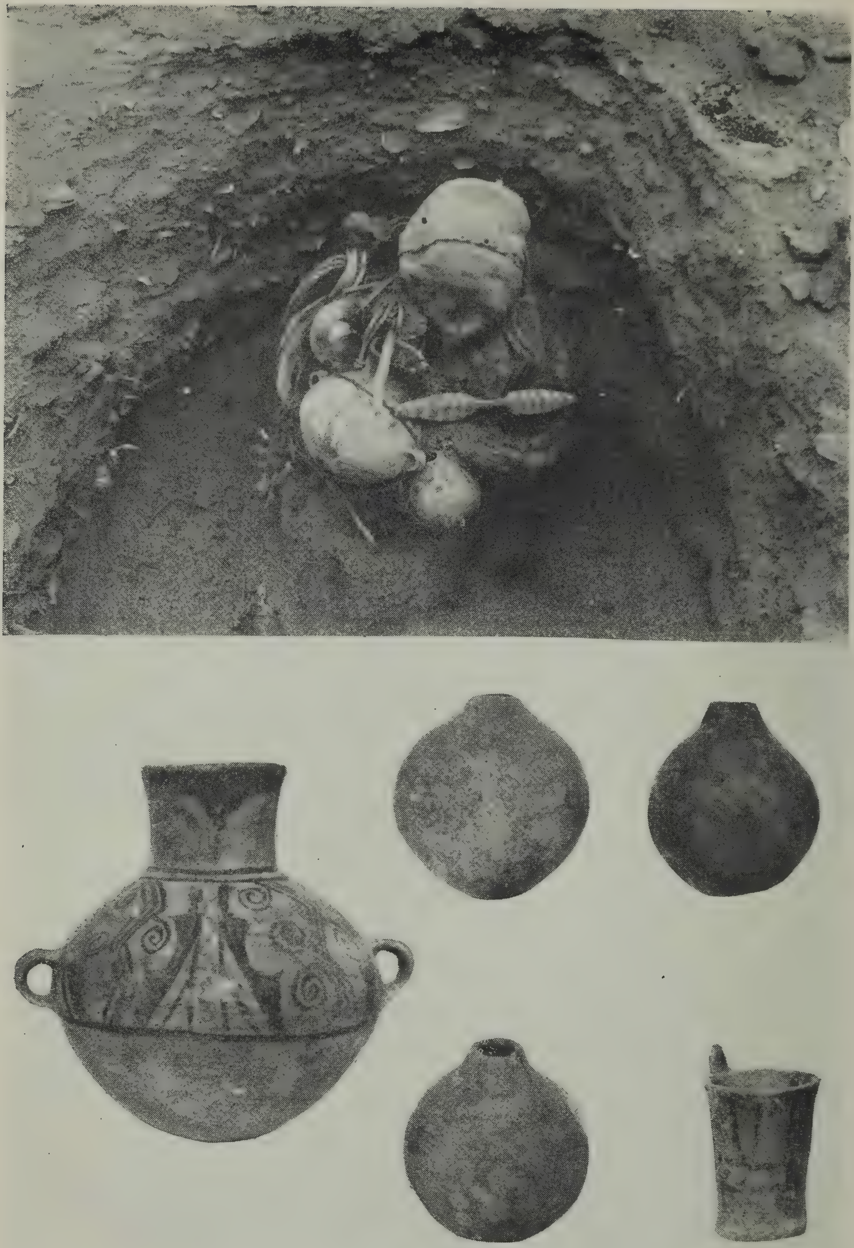

Plate 124.—**Child burial at Playa Miller, Arica.** Probably late Arica I Period. *Top:* Mummy and grave goods in refuse. *Bottom:* Ceramics from grave. (Vessel at left approx. 6⅜ inches (16 cm.) high; others to scale.) The globular forms are water jars of pottery fashioned after gourd containers. (Courtesy American Museum of Natural History.)

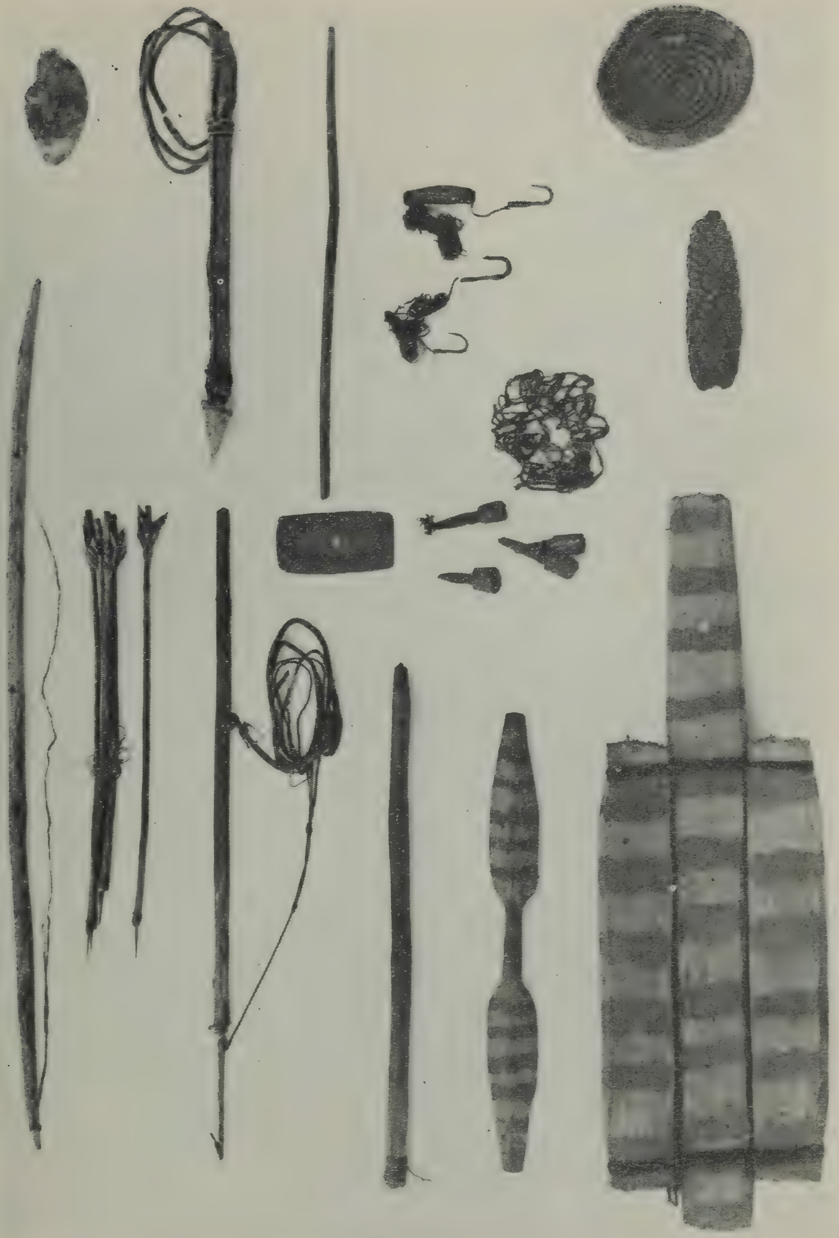

Plate 125.—**Toy replicas of artifacts, Playa Miller, Arica.** Found with the child burial. These include: A bow, arrows, fish harpoon, sealing harpoon forepiece with thong attached, raft and paddle, a flat piece of copper, a spindle with rectangular whorl, a netted cord bag with few wooden toplike objects, fishlines and hooks, small basket, and an ear of corn. (Scale: toy paddle is 11 inches (28 cms.) long.) (Courtesy American Museum of Natural History.)

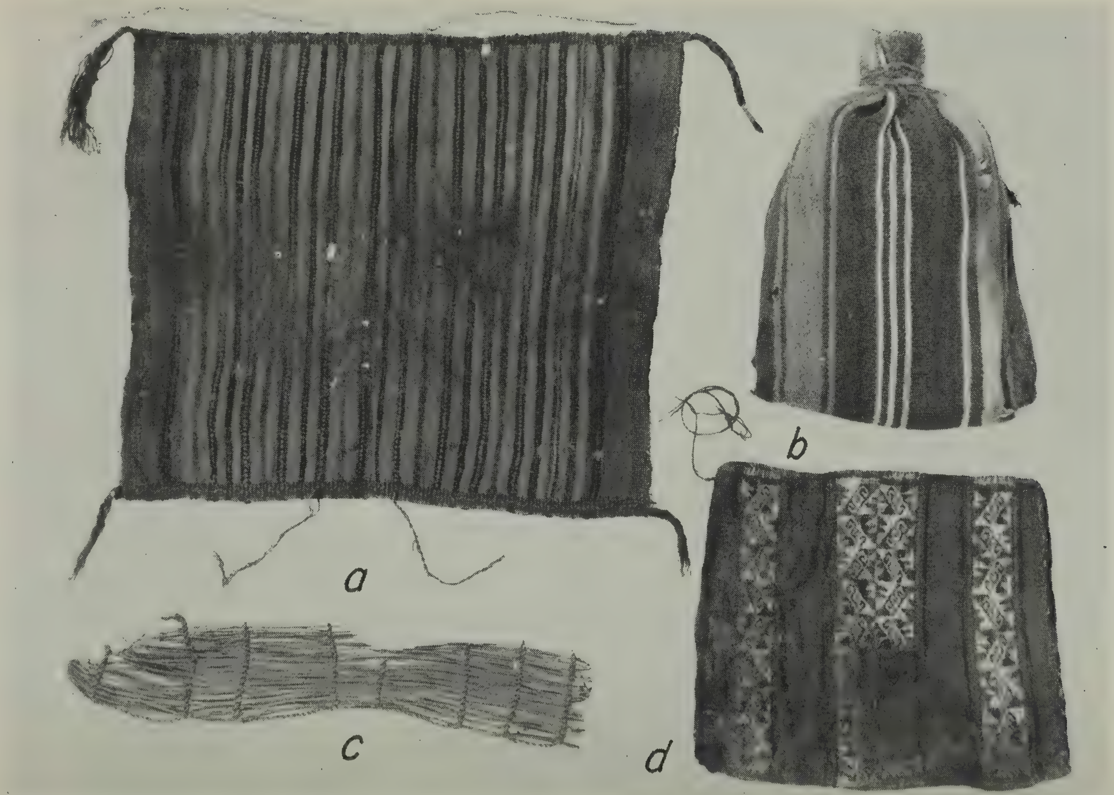

PLATE 126.—**Textiles at Playa Miller, Arica.** Found with child burial. *a*, Kerchief; *b*, meal bag; *c*, fragment of matting; *d*, coca bag. (Courtesy American Museum of Natural History.)

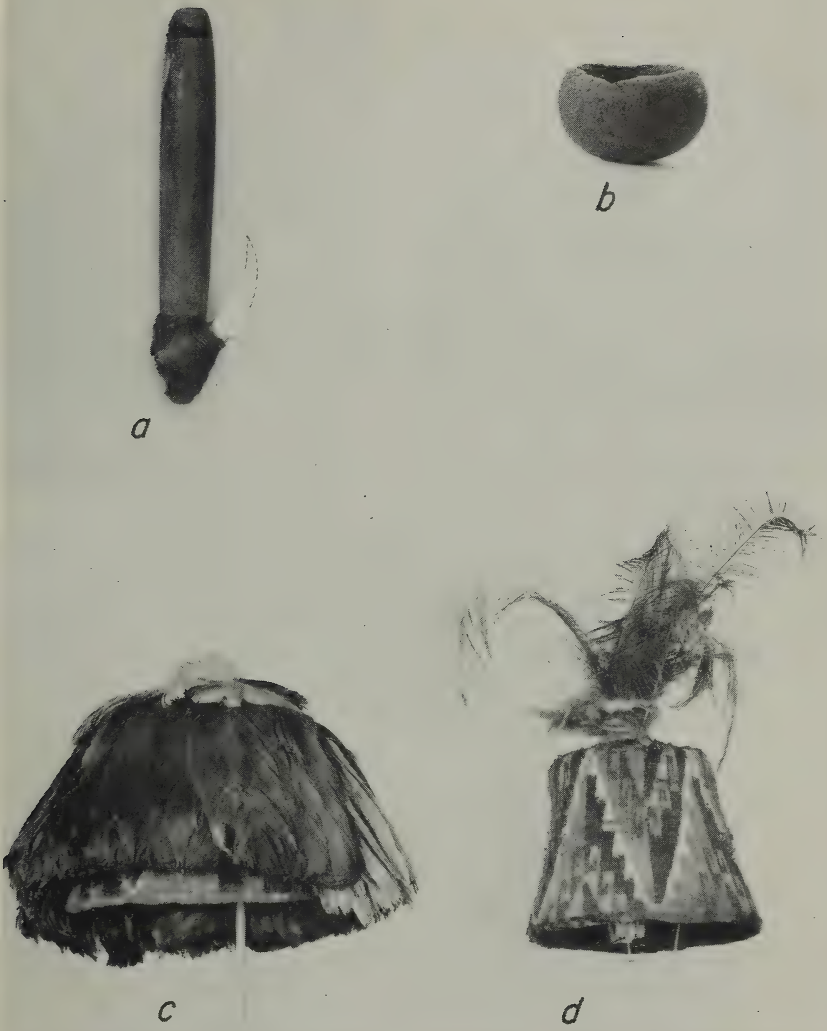

PLATE 127.—**Prehistoric artifacts from North Chile.**
(For explanation, see footnote, p. 588.)

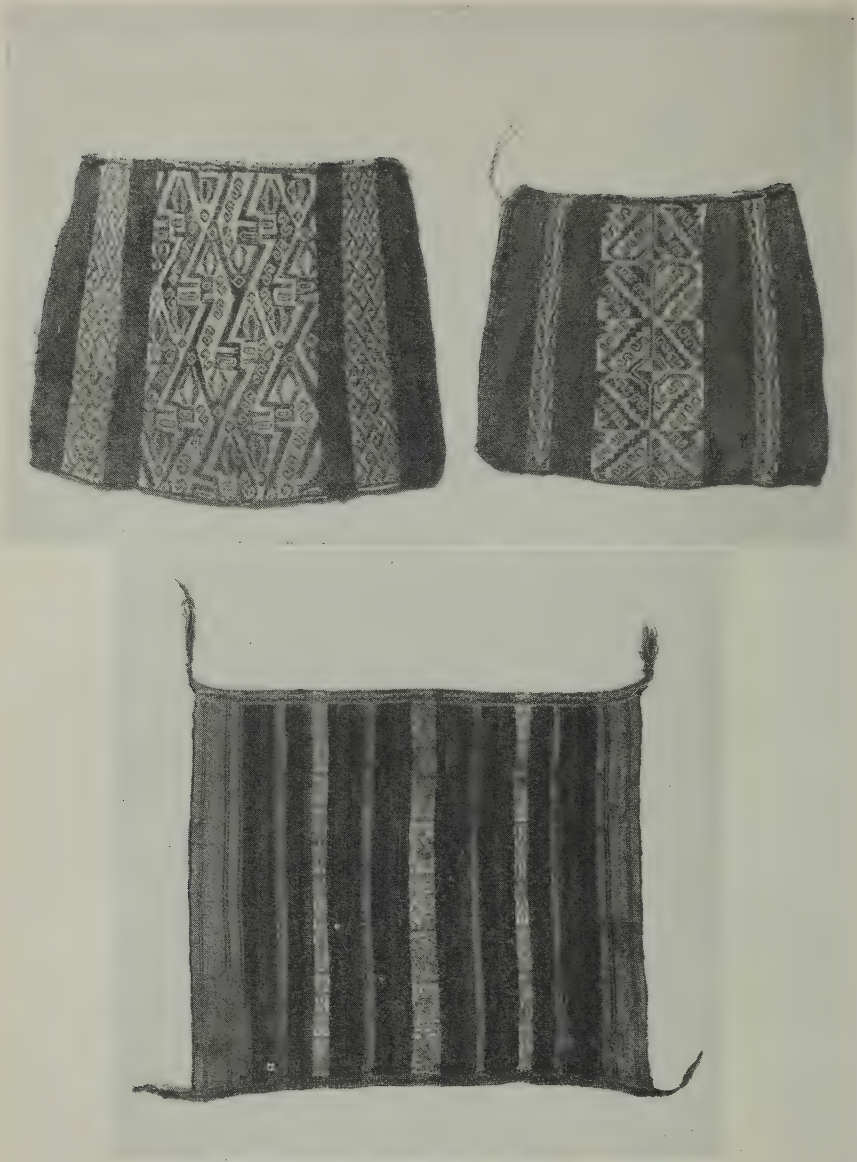

Plate 128.—**Prehistoric textiles from the vicinity of Arica.** Coca bags and kerchief have two-face warp design, the most elaborate weaving produced in the area. (Courtesy American Museum of Natural History.)

(Pichalo I and II). The latter is not readily distinguishable from the later cooking utensils but is accompanied by shallow bowls with a red slip, flaring sides, and thickened rims. These do not occur in the Arica sherd series and nothing is known of their origin or distribution. Coiled basketry occurs more abundantly with this ware than with the painted pottery, which is presumably later.

In addition to agriculture and ceramics, there are other distinctive features of material culture. Sealing harpoons with detachable forepieces have a new type of stone point. Pack baskets are made with a frame of three bent crossed sticks, and are used with broad carrying straps. Elements carried over from, or duplicating, those in the Second Preagricultural Period include: Fishhooks, thorns being replaced by copper before painted pottery appears (pl. 123, *b*, *e*, *f*, *h*); slightly modified cigar-shaped stone sinkers; detachable bone forepieces (pl. 123, *l*, *n*) for fish harpoons, which disappear and are replaced by ones of copper (pl. 123, *k*,) at the time of painted pottery; and throwing sticks.

Although narrow-stemmed arrow points are a feature of the Second Preagricultural Period, no bows were found in deposits older than painted pottery. The arrows have wooden and, perhaps, thorn tips and two feathers.

Other elements associated only with painted pottery are adzes with copper blades, wooden balsas or rafts made of one long central log and two shorter side logs, double-bladed paddles, dogs, and llamas. The last two may also have been known to the people with unpainted pottery, but the wool used in their textiles has not yet been identified and other evidence is lacking. Rough, percussion-flaked stone tools are also carried over into the last Agricultural Period.

Burials.—Burial customs in the periods mentioned vary considerably. Where grave goods are lacking, it is, of course, impossible to fix the burials in the midden chronology. At Pichalo there were several bodies, without accompanying artifacts, which had not been placed in graves but had lain exposed for some time on what had been the surface at the close of the First Preagricultural Period.

Prepared burials of two types, found at Arica and Pisagua, also appear to belong to the prepottery periods. In the burial type which may be the older, the body is extended on and covered with reed mats, with and without birdskin robes and rarely with artifacts. It is sometimes accompanied by artificially mummified babies, which were carefully prepared with sticks inserted to reinforce the arms and legs, the faces coated with clay and painted, and the heads equipped with artificial wigs.

In the second type, the body is flexed and folded in rush matting and covered with bird-skin or guanaco robes. Women have pubic coverings of loose plant fiber, men of woolen cords held together with twined cross strands. Grave goods are not always present and follow no fixed pattern.

Burials contemporary with unpainted pottery resemble the flexed burials just mentioned, and are covered or wrapped with rush matting. The graves are frequently marked with upright wooden posts. The bodies wear coarse, woolen, sleeveless shirts and are almost invariably accompanied by coiled baskets and some grave goods, but very rarely by pottery. There seems to have been no rule as to what items should be placed in the graves.

In graves which are contemporary with the painted pottery at Arica, the bodies are in a seated position, covered with sleeveless shirts and bound with cords. Sometimes rectangular stone vaults or cists were used, but not always. Maize flour or ears of maize or both and sometimes beans were provided as food. Special miniature pottery vessels duplicating the larger ones used in life were made; the pots in the older graves are generally painted, whereas the later ware is roughly finished. With the males, both adults and children, are model rafts and paddles. Miniature bows and arrows, sealing and fish harpoons, adzes, full-sized fishing lines, spindles, and coca bags were sometimes provided (pls. 124, 125). With women, in addition to food and vessels, are coca bags, spindles, and miniature loom sticks. Both men and women have small reed mats and sometimes gourd containers, composite combs, and dogs.

A few graves at Arica and Pisagua have yielded strictly Tiahuanaco vessels, but no detailed descriptions of them have been published.

How far south this pattern of burial customs occurs remains to be seen. Uhle supposed extended burials to be the oldest at Arica, but, as none have been found south of Iquique, and the artifacts of the first period of occupation are increasingly abundant down to Taltal and are known beyond, there is reason to doubt his conclusion. Presumably, such burials should occur within the radius of distribution of associated artifacts, but it is difficult to check. Too frequently, material has been collected from the graves with utter disregard of accurate records and with the loss of poorly preserved specimens.

Problems of culture relationships.—At Taltal, a great mass of material has been collected which has been the object of much discussion. Attention has focused largely on the interpretation of the abundant, rough, percussion-flaked tools made of impure basalt. A few of these bear a resemblance to European paleolithic specimens, which, together with statements that these occur in a stratum where pressure-flaked objects are absent, has given rise to the claim that Taltal has had a truly Paleolithic Period. Recent stratigraphic tests of the two largest middens fail to support this.

An examination of a large quantity of the coarse stonework indicates that the bulk of the objects are localized variations of the coarse percussion-flaked objects which occur in all periods at Arica, and are distributed south to the vicinity of Cape Horn (Bird 1938, pp. 272, 273, figs. 21; 22; 27, No. 29). Normally, these artifacts are made of oval, waterworn, porphyry cobblestones, which are unilaterally flaked. From their geographical and chronological distribution, it can be assumed that they served a variety of purposes, but the terms "hand ax" or "chopper" may be justified.

As the porphyry of which these pieces normally were manufactured is rare at Taltal, basalt was substituted, and a technique different from that employed with the harder material was used to shape it. An initial fracture exposed an unweathered surface, from which flakes were subsequently removed. These flaked objects would have to be classed as cores, except that the flakes removed were only rarely utilized and all their forms are duplicated among the objects made from the ordinary cobbles.

Many exceedingly skillfully chipped stone blades and points also occur in Taltal collections. It is believed that these date principally from the period just prior to the arrival of agriculture. Actually, agriculture, because of lack of arable land near Taltal, has never played an important part in the local economy. Intensive digging in late cemeteries, some of which have graves covered with mounds of earth that are readily found, has yielded collections which give more emphasis to the later artifacts than they deserve.

In the interior behind Taltal, up through the Province of Antofagasta, and south into the Province of Atacama as far as Caldera, is the region of the culture designated as *Atacameño*. Basically agricultural, its earliest phase strongly resembles the first Agricultural Period at Pisagua, but lacks the elements of Coastal life. The people made many coiled baskets, practiced weaving, and, if the Coastal middens and cemeteries are an index, had unpainted pottery which was rarely placed with the dead. Here, as mentioned, a marginal phase of Tiahuanaco culture is in evidence. Latcham attributes the introduction of pottery to the Tiahuanaco peoples, the *Atacameño* developing their own styles and forms subsequently. The *Atacameño* pottery, however, lacks similarity to the Tiahuanaco ware and some of the most characteristic *Atacameño* pieces are found below as well as above the Tiahuanaco sherds, which are exotic at Arica. The balance of the associated forms and designs found at Arica—those classed as a blend of Chincha and *Atacameño*—are reported to occur subsequently up until the arrival of the *Inca*. A conspicuous feature associated with them is the asymmetric cooking pot ("pato"), which does not accompany these forms farther north.

It may be that far less cultural evolution has occurred in this area than is supposed; that what are thought to be local styles or blends developed outside the region. In any case, more data from Bolivia and

Perú will be needed to clarify the problem. Also, the possibility of a preagricultural population in the same interior area should be considered, though we have no evidence that one existed.

At Caldera, we find the northernmost evidence of the Chilean *Diaguita* culture, described elsewhere (this volume, pp. 633–636). Attempts to locate middens which might fix the relationship of the *Diaguita* culture to the Coastal chronology have so far had negative results. The lack of strong motives for continuous occupation of particular sites and the extent of arable land in the *Diaguita* area resulted in the scattering of refuse. Recent work suggests that the evolution of the phases of *Diaguita* ceramic decoration was a rapid process, and that prior to the *Diaguita*, at least, in and at the mouth of the Elqui Valley, there existed a distinct and advanced culture.

Burials have yielded a distinctive polished gray-brown-to-black ware associated with ornaments of copper, T-shaped stone pipes, and beautifully finished stone labrets (Cornely, 1940). Similar pipes have been found as far north as the Río Loa and a jar of this type as far south as Valparaiso, but more specific data are not available.

Along the Coast north and south of Coquimbo, sherds of the Elqui Valley ware, some with finely incised geometric designs, are scattered more widely than the painted *Diaguita* pieces. Exact relationship of the two is not yet fully established. In one site with extremely shallow refuse, they occur together, although other work gives reason to believe that the polished ware is slightly older. Here, as at Arica, percussion-flaked stone tools, which continued in use to a late date, occur with late *Diaguita* sherds.

A noteworthy feature of the pre-Spanish culture of the Coast of North Chile and probably of all Chile is the complete absence of evidence indicating the use of nets for fishing, despite unsupported statements to the contrary in the literature. Today, however, net fishing is commonly practiced.

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THE HISTORIC INHABITANTS OF THE NORTH CHILEAN COAST

By Junius B. Bird

ABORIGINAL AND MODERN PEOPLES

The term *Chango* is still used in Chile to designate the poorer elements of the population of the North Coast, but the *Chango* have long ceased to exist as an ethnic or cultural group. As the term recurs in anthropological literature, generally in brief statements combining vague historical references and confused and incomplete archeological data, an analysis of our knowledge of these people may be useful.

We know from archeological work that prior to the Spanish occupation of Chile, beginning in 1535, the Coast of the desert area from Arica southward was occupied by people with a combined fishing and agricultural economy. There had been a succession of cultures, each somewhat more advanced than the preceding. This succession is most clearly traceable in the northern portion of the Coast. The lack of arable land precluded the development of large settlements, while other factors further delimited the cultural development. The Spaniards, seeking either mineral wealth or lands suitable for agricultural development, found nothing in the possessions of the Coastal people to arouse their cupidity or interest, hence the early records are devoid of pertinent data.[1] The baptism of a "*Chiango*" child from Cobija is recorded in 1665 (Sayago, 1874, p. 183). In 1757, these people were warned that if they persisted in their nomadic wanderings from Caldera as far north as Paposo they would miss the benefits of religion (Sayago, 1874, p. 190, footnote). In 1762, a small company of "caballeria" were recruited among the *Chango* to provide protection from the corsairs and smugglers, who were then active (Sayago, 1874, p. 194).

Such vague references convey little concrete information except that the Coastal folk were recognized as a small group variously termed *Chango*, *Chiango*, or *Chaonco*, with no clue as to the origin of the name; that they were nomadic, with families ranging along as much as 150 miles of coastline; and that they had established early contacts with the Spaniards which did not materially alter their way of life.

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[1] Bowman (1924, p. 59), in speaking of the *Chango* states: "They . . . early attracted the notice of Spanish writers. Lozano Machuca [Juan Lozano de Machuco? Juan Lorenzo Machuca?] stated in 1581 that there were 400 Uros or Changos Indians, fishers and heathen, in the Bay of Atacama (Cobija)."

The estimate that their territory extended along 800 miles of Coast between the Río Loa and the Río Choapa may be too small (Latcham, 1910, p. 22). Whether there was a cultural and linguistic unity over this distance is not recorded. From archeological remains antedating the Spanish invasion by only a relatively short time, it is clear that there were marked regional cultural differences with a slow diffusion of cultural elements occurring from north to south (Bird, 1943, pp. 307–08).

With respect to the vague historic references to *Uru* along the northern portion of the Coast of the Chilean desert, even less can be deduced than in the case of the *Chango*. Most significant is perhaps the absence of direct parallels in archeological material from that portion of the Coast with the material culture of the *Uru* of the Lake Titicaca drainage system. Even though there may be superficial resemblances of clothing, footgear, coca bags, and the use of the bolas, and a similarity in way of life, the distinctions in their dwellings and hunting and fishing gear justify the belief that there was no direct connection.

CULTURE

Recorded data on the material culture of the *Chango* are extremely meager, and what there is has never been fully compiled. D'Orbigny's brief observations in 1830 (1835–47, 2:350–51, 466–67; 4:151–52) are perhaps the best. At that time, at Cobija, they spoke Spanish and were living in simple huts or shelters consisting of four posts covered with sea lion skins and kelp and located 5 to 6 miles (8 to 10 km.) from drinking water. The women used pack baskets made with a crossed-stick foundation and carried by means of a tump strap or line. They wove fairly good cloth but patterned their clothes after the Spanish styles. The men used inflated skin rafts, double-bladed paddles, and fish harpoons. Though the use of fish nets and small sails is reported among fishermen with the same type of raft at Valparaiso (Frézier, 1717, pp. 120–21), there is no evidence either historical or archeological that these were ever used farther north.

Later writers add but little to these meager data and far too often confuse their accounts by drawing on archeological material of questionable *Chango* origin to round out their discussion. The commercial development of North Chile in the last century completed the final assimilation of what remained of *Chango* culture.

Those to whom the name is now applied are, as stated, the poorer Coastal inhabitants, sedentary folk content with a meager livelihood derived from a combination of fishing, marginal farming, fuel gathering, work as stevedores, and, in a few areas, hunting. Some have a few sheep, goats, and burros. There is no longer anything either cultural, physical, or linguistic to distinguish them from other people similarly engaged in other parts of Chile.

Perhaps the only element of their old culture surviving into this century is the sea lion skin float. These are best described and illustrated by Lothrop (1932). To these data little can be added. In 1942, one man to the north of Coquimbo was said to be still using such a float.

No evidence of these craft have been found archeologically. Gut water bags with a seam lashing analogous to the technique used in joining the skins of the floats occur with the oldest agricultural remains at Punta Pichalo and with material of undertain age at Chiu-chiu. At Arica models of rafts made of three logs accompanied by double-bladed paddles are common (Bird, 1943, fig. 10, *k*). These may well have been in use much farther south wherever suitable wood could be obtained, an assumption supported by Frézier's description (1717, p. 81) of 3-log rafts at Concepción.

Other items of *Chango* material culture are traceable back to various epochs. The crossed-stick pack baskets and carrying straps appear first in the second agricultural division at Punta Pichalo, while the form of the fish harpoon is considerably older, occurring commonly in preagricultural refuse. A squid hook or jigger still in use can be traced back to the same time, while the form of the sea lion harpoon used in historic times has an even earlier origin. In other words, *Chango* culture, from at least Paposo southward, appears to have been a blend of elements drawn from the various cultural divisions in evidence at Arica and Punta Pichalo.

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THE ATACAMEÑO

By Wendell C. Bennett

INTRODUCTION

The term *Atacameño* (*Atacama, Kunza*) refers to a people, with a distinctive language and culture, who once occupied the northern Chilean provinces of Tacna, Arica, Tarapacá, Antofagasta, and Atacama, and much of the Northwest Argentine provinces of Los Andes, Salta, and Jujuy. The name is probably derived from the Chilean town of San Pedro de Atacama, which was one of the principal centers of this culture. Today, the few remaining *Atacameño* are located in isolated sections of Chile and the Puna de Jujuy, but culturally and linguistically they have been absorbed by *Aymara* or Spanish. No contemporary ethnological studies have been made. Likewise, the Spanish historical sources furnish little information about these people. One early document mentions two divisions of the *Atacameño* in northwest Argentina—the *Casavindo,* who spoke a *Diaguita* language, and the *Cochinoca,* who were mixed with the *Chicha.* No further information is given. As a result of this paucity of historical and contemporary information, knowledge of the *Atacameño* culture comes largely through archeology. (See also Casanova on the Puna de Atacama, the Puna de Jujuy, and the Quebrada of Humahuaca.)

GEOGRAPHY

The *Atacameño* occupied an area along the southern margin of the Central Andean region of Perú and Bolivia (map 1, *No. 8;* map 5). From the point of view of human inhabitation, the environment is far from favorable. The desert conditions which characterize the west coast of Perú reach their maximum intensity in North Chile where the dry belt cuts across the Andes into Argentina. The 600-mile (960 km.) stretch from Arica to Caldera in Chile is one of the most complete desert areas of South America. Along the Pacific, a Coastal mountain range rises from the sea like an unbroken wall to an altitude of between 2,000 and 3,000 feet (about 600 to 900 m.). Only one river, the Río Loa, makes its way through this Coastal range. The plateau between the Coastal mountains and the high Andes is composed of old lake beds and alluvial fans, and in many sections rainfall has never been recorded. These conditions have made the Atacama Desert famous as the best source of natural nitrate in the world. There are, however, a few inhabitable oases, watered by temporary mountain streams or underground water seepage. The largest are at Tacna, Arica, and Calama. Even these are not very extensive, as the Calama oasis in the Río Loa illustrates. It consists of only some 12 square miles (about 32 sq. km.) of cultivable land at an altitude of around 7,000 feet (about 2,100 m.).

In Argentina, the *Atacameño* area is somewhat similar to the eastern Bolivian Andes, with dry intermont basins, undissected puna, and isolated mountain ranges up to 19,000 feet (about 6,000 m.) altitude. Elsewhere in the Argentine Andes, the intermont basins are larger and more water is available for irrigation.

In spite of the unfavorable features of the environment, the archeological investigations have shown that small fishing groups lived along the Pacific Coast, supplementing their marine subsistence with some hunting of animals in sections where the sparse vegetation supported land game. Little agriculture was possible except at such favored spots as Arica. At some places on the Coast grazing was made possible by the heavy fogs, which produce enough moisture for slight vegetation on the Coastal hills. However, it is not surprising that Coastal hunting and fishing groups survived into late agricultural times. In the interior, the various oases supported some cultivation, and the adjacent puna lands were used for grazing. The same is true of the Andean puna, although much of this is too high or too dry for agriculture. In the more favored basins of Salta and Jujuy, better agriculture was possible.

The environment undoubtedly influenced the cultural history of the *Atacameño* in many ways. Local calamities must have been frequent, since but a minor shift in the mountain rainfall would affect the cultivated area in the Atacama Desert. For another example, it was possible for small groups to live for long periods of time in comparative isolation, since the terrain was not sufficiently attractive to tempt their more powerful northern and southern neighbors. Still, trade with these advanced neighbors was always possible and probably accounts for much cultural change. The situation was quite distinct in the better basins of Salta and Jujuy, and here the *Atacameño* were ultimately replaced by the more advanced *Diaguita*.

A number of authors think that there must have been significant climatic changes, particularly in North Chile, where algarrobo forests are found partially buried by sand, and where old irrigation ditches are located in now waterless sections. However, such occurrences might be accounted for in other ways, and as yet there is no convincing evidence of major climatic change during the period of human occupation.

South of the *Atacameño* region in Chile, the desert conditions become less intense as the transition is made to the Mediterranean climate of the Central Valley. Geographically, the southern boundary of the Atacama Desert is the Copiapó River. On the eastern side of the Andes, there is less climatic change to the south, but the intermont basins are larger, and the streams more permanent. The immediate southern neighbors of the *Atacameño* on both sides of the mountains were the *Diaguita*.

CHRONOLOGICAL POSITION

On the basis of archeological finds, the principal centers of the *Atacameño* culture were in the provinces of Antofagasta, Chile, and Jujuy, Argentina, and there is some evidence that the culture also extended into adjacent provinces in both countries. A number of authors have suggested that the *Atacameño* once occupied a much larger territory. Their evidence is based on place names which seem to be of *Atacameño* origin rather than *Diaguita*, *Quechua*, or *Aymara*. Such place names appear throughout North Chile, in large sections of Northwest Argentina, in Southern Bolivia, around Lake Titicaca, along the South Coast of Perú, in the Arequipa district, and even in some localities around Cuzco, the capital of the *Inca* Empire. The significance of this wide spread of *Atacameño* place names is still uncertain. In the present description of *Atacameño* culture, only the central area is considered since it presents the best archeological materials.[1]

The determination of the *Atacameño* chronological position depends on which section of the total area is considered and on which characteristics are selected as diagnostics. Many authors call the total archeological history of North Chile "*Atacameño*," and distinguish various subdivisions based on influences from other cultures. For example, Latcham (1938 a) thinks that the *Atacameño* Period may cover a time span of some 2,000 years, but that the typical diagnostics do not emerge until post-Tiahuanaco times or, according to his dating, between A.D. 900 and 1100. Uhle (1919) speaks of *Atacameño* influence in the Titicaca Basin in pre-Tiahuanaco times. He also considers the early fishing cultures on the North Coast of Chile as a branch of *Atacameño*. In contrast to this view of *Atacameño* antiquity, Vignati reports the finding of a Peruvian coin dated 1677 in an *Atacameño* grave.

Leaving aside the question of ultimate origins, Latcham (1938 a) states that only the periods following the Tiahuanaco are characteristically *Atacameño*. He believes also that the Coastal sequence proposed by Uhle is applicable in part to the Río Loa region. The three early periods are not found, so the sequence starts with Period 4,

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[1] See Casanova, p. 619, this volume.

Tiahuanaco and Epigonal (A.D. 600–900), and is followed by Period 5, Indigenous *Atacameño* (A.D. 900–1100), Period 6, Chincha-*Atacameño* (A.D. 1100–1350), and Period 7, *Inca* (1350 until the Spanish Conquest). This sequence is questioned by some archeologists, first, because Classic Tiahuanaco design is found on such typical *Atacameño* artifacts as the wooden snuff tablets; and, second, because some graves have been isolated at Río Loa which contain Decadent Tiahuanaco pottery. Thus an *Atacameño* Period might have existed in times contemporaneous with Classic Tiahuanaco, and later in the local Calama region, a Decadent Tiahuanaco Period might have temporarily interrupted the *Atacameño* sequence for a short time. Furthermore, the significance and validity of the "Chincha-*Atacameño*" division is yet to be established satisfactorily.

The archeological work in Northwest Argentina presents a somewhat different picture. Ambrosetti (1907) has described the contents of 202 graves which he excavated at the site of La Paya in the upper Calchaquí Valley, Salta Province. An analysis of these graves shows that the site had a mixed occupation, including pure *Atacameño*, *Atacameño* mixed with *Diaguita*, pure *Diaguita*, and *Diaguita* mixed with a local variety of *Inca*. The La Paya chronology appears to follow this same order, that is, with the pure *Atacameño* graves as the earliest, and definitely pre-*Diaguita*. Furthermore, the La Paya *Atacameño* shows no evidence of Tiahuanaco, *Diaguita*, Chincha or *Inca* influence. On the other hand, the grave types and artifacts are closely related to those found in the Río Loa region. In other words, the La Paya evidence suggests that an early *Atacameño* first mixed with and was then replaced by *Diaguita* in pre-*Inca* times.

Von Rosen (1924) excavated at two sites, Casabindo and Morohuasi, both situated on the Puna de Jujuy, roughly between the La Paya and the Río Loa regions. At both sites, the buildings, the burial type, and some of the ceramic styles definitely correspond to the *Inca* Period. At the same time, most of the nonceramic artifacts are typical of *Atacameño* as defined by the early La Paya graves and the excavations at Calama on the Río Loa.

A summation of the evidence from these three regions suggests that a pattern of culture, here designated *Atacameño*, was established throughout the total area at a relatively early date, in part contemporaneous with Classical Tiahuanaco, and perhaps having its origins even farther in the past. In some of the more isolated areas, a substantial part of this culture persisted into post-Spanish times. From time to time, this basic *Atacameño* culture was influenced by others, including Tiahuanaco, *Diaguita*, the so-called Chincha, and *Inca*. These influences modified and enriched the basic pattern, without, however, replacing or eliminating it entirely. Were the records more complete, it could probably be demonstrated that the majority of "pure" *Atacameño* characteristics were particularly well-adapted to the difficult environment of North Chile and the Puna de Jujuy. In the following pages, a résumé of this basic pattern is given, followed by a more detailed description of its component elements. Many details of material culture are known since archeological preservation in this dry environment is excellent.

LATER HISTORY

Even before the Spanish Conquest, the territory of the *Atacameño* had been badly reduced; first, by the *Diaguita*, and later, by the *Inca*, who assumed total political control. Following the Spanish Conquest, the *Quechua*- and *Aymara*-speaking Indians continued their penetration into Chile and Argentina.

The Atacama desert region held but little interest for the conquering Spaniards. The first Spaniards to reach the Río Loa region, Francisco de Aguirre and Pedro de Valdivia in 1540, were not tempted to remain. Later, the encomienda system was implanted but was never particularly successful. The Calama Oasis became a stop-over on the trip from the Bolivian Highlands to the Chilean Coastal ports. Actually, it was not until the nitrate fields became important in the 19th century that any great attention was paid to this area. Today, the large copper and nitrate interests have reduced the Indians' terrain even further, and the remaining *Atacameño* have been largely absorbed by the *Aymara*- or Spanish-speaking populations. It is barely possible that a few native speakers may still be found in isolated spots of the upper Río Loa Basin and the Puna de Atacama.

BASIC ATACAMEÑO CULTURE

The *Atacameño* were basically agriculturists and herders. Agriculture was concentrated in the few favorable oases where irrigation was possible. Digging sticks, wooden shovels, and knifelike tools were the principal implements utilized in cultivation. Llama and alpaca herding was also a major activity, and, as a consequence, the *Atacameño* were great traders. Hunting, except of birds, could not have been of great importance, but certain weapons were developed for warfare, including the bow and arrow, the sling, and the wooden knuckle-duster. Cloth or leather armor was used, and villages were often fortified. The typical village consisted of a number of stone houses arranged along irregular streets and surrounded by an enclosure wall. The houses were rectangular with flat roofs made of perishable materials.

The characteristic grave was a roofed-over cylindrical cyst. Mummies were prepared with considerable care, and the grave furniture was usually elaborate, particularly in respect to nonceramic artifacts. Woodwork was the most distinctive craft. Carved wooden tablets and nose tubes, for the preparation and taking of snuff, are usually considered as outstanding *Atacameño* diagnostics. Other typical wooden artifacts include knives, shovels, wooden cow bells, plain and decorated whorls, a variety of boxes for paint containers, toggles for llama cinches, spoons, and wooden goblets. The *Atacameño* were outstanding not only in their variety of wooden objects, but also in the skill of their carving.

Many stone artifacts were made but none is particularly distinctive. Some simple metal tools such as chisels and tweezers were made, but the great development of metallurgy seems to have resulted from outside influence. Leatherwork, however, was typical, including small bags for holding paints, leather sandals, and quite a variety of other articles. Llama wool was woven into simple garments of the common Andean pattern. Considerable skill was employed in the manufacture of coiled baskets, although other techniques were limited. The pottery, for the most part, was relatively crude, simply decorated, and largely utilitarian in form. A number of articles were made from bone, among which spoonlike spatulas with incised circles as decoration were outstanding. Calabash bowls were in common use, and many were decorated with pyrogravure. Practically nothing is known about the social, political, and religious organization.

The frequent contacts with neighboring cultures added many elements to this simple pattern. Various types of fishing gear were borrowed from the specialized Coastal fishing people. Tiahuanaco contacts would account for the elaboration of incised design, better ceramics, and more competent weaving. New variety and skill in metalwork, as well as certain improvements in ceramic technique and architecture, may well have been borrowed from the *Diaguita*. In North Chile, the Late Periods show a florescence of ceramic shapes and designs suggestive of influence from the South Coast of Perú. However, in spite of the fact that the *Inca* technically incorporated the *Atacameño* in their Empire, direct influence on the culture was slight.

PROBLEMS

One of the basic needs in the *Atacameño* region is a careful chronological study. This undoubtedly would require more field work, particularly with controlled excavation of refuse sites and careful attention to grave isolation. The North Coast of Chile is of particular interest because of the discovery of at least two preceramic periods of considerable antiquity. Consequently, it is possible to study in this region the relationships of the early hunting and fishing populations to the higher civilizations.

The *Atacameño* territory is marginal to the Central Andes, and thus its chronology should serve as a check on sequences established farther north. Likewise, *Atacameño* archeology should be the link between the *Araucanian* and *Diaguita* and the Central Andean cultures. It appears at present as if a basic *Atacameño* culture persisted over a long period of time, and that significant changes were due largely to trade with neighboring cultures. Thus, there is an excellent opportunity to make a careful archeological study of cultural change caused by trade contacts. The *Atacameño* region is rich in remains, and the preservation is superb so that many studies of a detailed nature can still be made of the materials themselves.

SOURCES

Many monographs and numerous short papers have been published on *Atacameño* archeology. A few selected sources are given here which cover the major areas and topics.

Many studies have been made of the geography of North Chile and Northwest Argentina, but a concise and quite comprehensive picture is presented by Bird (1943), Bowman (1924), and James (1942).

The limited studies which have been made of the *Atacameño* language are summed up by Schuller (1908) and Vaisse, Hoyas, and Echeverría (1895).

The archeology of North Chile and many illustrations of *Atacameño* materials can be found in Bird (1943), Brand (1941 b), Créqui-Montfort (1906), Guevara (1929), Latcham (1936 a, 1936 b, 1938 a), Montell (1926), Rydén (1944), and Uhle (1913 c, 1919).

For Northwest Argentina some special studies pertinent to the *Atacameño* problem have been made by Ambrosetti (1902 b, 1907–08), Bowman (1908), Casanova (1938), Debenedetti (1912), Rosen (1924), Serrano (1930), and Vignati (1931).

The problem of the Chincha-*Atacameño* style has been treated in a number of the sources mentioned above, but a résumé discussion may be found in Métraux (1930 a).

Detailed studies of special topics include reports on basketry by Oyarzún (1930), on metallurgy by Latcham (1936 c), and on ceramics by Latcham (1928 b).

LANGUAGE

The *Atacameño* spoke a language generally known as *Kunza*, sometimes called *Likan-antai*. In fact, the term *Likana* is occasionally used to designate the total *Atacameño* area. *Kunza* was spoken up to the end of the last century and may still survive in isolated spots in the Puna de Jujuy. No thorough study of this language has ever been made, but Vaisse, Hoyas, and Echeverría (1895) assembled all the early 19th-century sources into a limited vocabulary of 1,100 words. Some additions to this have been made on the basis of place names. The *Kunza* language is distinct from both *Quechua* and *Aymara*, and although some authors have suggested a possible relationship with the

Kakan language of the *Diaguita*, the evidence is not generally accepted. Most surviving Indians of *Atacameño* origin now speak either *Aymara* or Spanish.

POPULATION

In physical type, the *Atacameño* do not seem to have differed greatly from other peoples of the Andes. They are described as short in stature and brachycephalic, although dolichocephalic skulls are reportedly found in early Coastal fishing sites. Artificial deformation of the skull was a common practice. Skull deformation was of two types, "sugar loaf" of Tiahuanaco type, and "frontal-occipital," which seems to be more recent. Such limited studies as have been made of the skeletal remains suggest some mixture of physical types.

There are no good statistics on the number of Indians in the total *Atacameño* area. Guevara (1929) quotes an estimate made in the middle of the 18th century by the Viceroy José de Manso of 1,632 inhabitants for the Chilean Atacama region. He also mentions an estimate of 4,000 made in 1853 for the same region, although he suggests that this probably included other than pure *Atacameño.* Only 2,000 were included in the 1884 estimate. However, Brand (1941 b) thinks that there may still be some 4,000 pure and mixed *Atacameño* today.

CULTURE

SUBSISTENCE ACTIVITIES

Agriculture.—The *Atacameño* were agriculturists in spite of the fact that suitable terrain for cultivation was limited. Most of the known archeological sites are situated in regions in which at least some agriculture could be practiced. Maize was the principal crop, although beans, quinoa, squash, calabashes, and chili peppers were also raised. Potatoes were certainly known in the Late Period, and there is some indication that cotton and tobacco were also cultivated. Good irrigation systems have been found in association with *Atacameño* sites. Some of them utilized large blocks and grooved canal stones forming stone-lined aqueducts, which carried the water for considerable distances. Among the agricultural implements, wooden digging sticks, spades, and shovels are common. Hafted stone blades, like shovels in appearance, were probably used as hoes. Plain wooden clubs served to break up clods, and similar use was made of the characteristic curved wooden knife, in the form of a scimiter.

Herding.—The herding of llamas and alpacas was also a mojor activity, of an economic importance equal to and in some places even greater than agriculture. The wool fibers were used extensively for weaving and cordage, the skins were used in the leatherwork, tools were made from the bones, and the meat was eaten. These animals were also important for transportation. One of the characteristic *Atacameño* artifacts is a wooden toggle, of V-shape, with knobs at each end, which served as a cinch buckle for fastening the packs on the llamas. Wooden cowbells with wooden clappers are also common and were probably used for the lead llama in a train. Dogs were the only other domesticated animals, but these were considered of sufficient importance to be mummified and placed in the graves.

Hunting and fishing.—Hunting and fishing were of major importance along the Pacific Coast, where fish and sea mammals are abundant. Typical fishing gear includes the harpoon, thorn hooks, and sinkers, long in use by the Coastal peoples. In the interior, some rare wild guanacos and vicuñas were hunted, and birds of many kinds were abundant. The bow and arrow and the sling were the principal weapons. Some authorities add the bolas as well, but the distribution of this weapon throughout the *Atacameño* region is yet to be demonstrated. Collecting of shellfish of various kinds was important along the Coast, and in the interior the leading wild-plant foods were the chañar fruit and the algarrobo beans, from which meal and a mildly intoxicating beer were made.

Food preservation.—These subsistence activities yielded a reasonable food supply for the small communities. However, the threat of a calamity made the preservation of food especially vital. Special granaries were built in caves and in corners of the houses. Fish and meat were also dried, and preserved in these storage bins.

TRADE

Owing to the limitations of the environment, the *Atacameño* were dependent on outside sources for many materials. There is considerable evidence of widespread trade, both within the area and outside, and the *Atacameño* are frequently referred to as the "middlemen" of the Andes. Trade was probably carried on largely in connection with llama herding; at least, there is no basis for suggesting the existence of professional trading groups. In some places roadways as much as 10 feet (3 m.) in width are marekd out, although not paved. Aside from the llamas, goods were carried in hampers on the back by means of a forehead tumpline.

Within the area, especially between the Coast and the interior, trade was active. As evidence, quinoa seeds have been found in Coast graves; dried fish in the interior. At La Paya in Northwest Argentina, marine shells from the Pacific are commonly found in the graves. Other common trade articles were tobacco, chili pepper, llama wool, and salt. Trade objects from outside the *Atacameño* area are equally numerous, such as the more elaborate metal artifacts, which were probably manufactured by the *Diaguita.*

HOUSES AND VILLAGES

Architectural work is associated with *Atacameño* everywhere except along the Chilean Coast. In fact, this is one of the most important differences between Coastal and inland sites.

Atacameño villages are generally compact, and of relatively small size. One of the largest in the Río Loa region covers an area about 900 by 1,300 feet (300 by 400 m.), and was probably used more as a refuge fortress than a village. The villages are usually located on natural rocky outcrops in the immediate vicinity of the agricultural land. A typical village consists of a number of rectangular houses arranged roughly in rows on different levels. Narrow streets or alleys separate the rows of houses and miscellaneous meandering walls occur. A defense wall encircles the whole unit, and contains 12-inch-square loopholes through which the defenders could shoot their arrows. The houses are rectangular and small, about 10 by 13 feet (3 by 4 m.) in maximum size. The walls are made of split and selected, although not dressed, stone slabs set in a mud cement, and, in rare cases, logs and adobes are employed in the construction. In the so-called Early Period, the floors are of hard-packed clay and the walls are about 4½ feet (1½ m.) high, but there is no trace of windows, niches, or doorways. Presumably, the entrance was through the flat roof which was made of poles and sticks covered with clay. In later periods, the houses have higher walls, up to 10 feet (3 m.), and doors, windows, and interior niches are characteristic. Most of them still have flat or pent roofs, but some gabled roofs are found in *Inca*-influenced buildings. The doors are made with lintels and well-squared joints, and measure about 3 feet (1 m.) in width and from 6 to 7 feet (about 2 m.) in height. Each house usually has one window, and it is possible that both windows and doors were once closed with rush or cane mats.

Storage bins are commonly located in the corners of the houses. They are about 4 feet high, and have a window-door at the base. Although now open at the top, they probably once had covers of sticks and rushes. There are likewise underground granaries, lined with stone slabs. Burials are found in some of the granaries and under the floors of the houses. They are also located in caves in the natural rock outcrops on which the villages are built.

In general, household artifacts are rarely found inside the dwellings. Furthermore, the houses do not contain fireplaces. In all probability, the houses were principally used as sleeping quarters, while most of the other activities, including the cooking, was carried on outside under temporary shelters. At least, large stone mortars and metates are commonly found around the villages, outside of the houses.

On the whole, *Atacameño* architecture does not differ very greatly from *Diaguita* or much of *Inca* masonry. In fact, Latcham (1938 a) credits the *Atacameño* with inspiring the *Inca* in their architecture. In particular, he claims that the use of windows in houses was an *Atacameño* invention, and that the common *Quechua* word tocco, "window," is of *Atacameño* origin.

DRESS AND ORNAMENTS

Atacameño dress follows the standard Andean pattern. The men probably wore breechclouts, although actual specimens are rare in the collections with the exception of some from the Coast sites made of totora fiber. The men used slit-necked shirts, both with and without sleeves, secured at the waist with a belt. A poncholike garment was also worn. The women wore longer shirtlike garments, and belts around the waist. Both sexes used flat leather sandals. Headgear consisted of velvet caps, basketry hats, and hats made of bird or animal skins. Other garments discovered are leather shirts, bird-skin capes, and rough woolen blankets. Ornaments were common, including pins, rings, bracelets, earrings, breast plaques, armlets, beads, and pendants. The wooden combs described under "Weaving" may well have been used as ornaments as well. Both women and men wore their hair in many short braids, and the men plucked their beards with metal tweezers. The number of paint boxes and bags would suggest that body painting was common.

GRAVES AND BURIALS

Graves.—Some graves are found in various parts of the villages and houses, but there are also true cemeteries, usually located in the sands along the margins of the valleys, away from the villages and away from the cultivated land. Natural rock caves were also utilized for burial purposes up to *Inca* times. In the Río Loa region, some cemeteries were reserved for child burials. Although this is suggestive of the *Diaguita* pattern, the burials are not in urns. Even at La Paya, adjacent to the *Diaguita* area, child urn burial has not been reported.

Various types of graves have been encountered in the *Atacameño* region. The simplest and the most characteristic is a cylindrical pit, roofed over with sticks and cane, and covered with sand and dirt. In the Río Loa region, the pits are from 16 to 24 inches (40 to 60 cm.) in diameter, and about 4½ feet (1½ m.) deep. At La Paya, the graves are stone lined and covered, and range in size from 3 to 6 feet (1 to 2 m.) in diameter and from 3 to 6 feet (1 to 2 m.) in depth. There are a number of variants of this simple circular-pit grave. Chambers may be cut to one side, producing a boot-shaped profile in cross section. Likewise, true bottle-shaped graves are found, covered with stone slabs. Some reports describe subterranean chambers entered by means of an inclined trench. Platform benches on which mummies were set were arranged around the walls of the chambers. This type of burial vault is of interest because of its resemblance to a type of family mausoleum which is still utilized today. Both in the Río Loa region and on the Puna de Jujuy, the *Inca* Period is represented by stone-lined chambers in true burial mounds.

Mummies.—In all the North Chile archeological periods, considerable attention was paid to the preparation of the corpse before interment. The most elaborate mummies are those of infants which have been found at Coastal sites, in periods which apparently precede the formation of the true *Atacameño* pattern. In these, the body viscera were removed, and the interior cavity stuffed with grass or other material. Various sticks were inserted to give greater rigidity to the body, which was then covered with a thick coating of clay and painted. In the true *Atacameño* Periods, the bodies were flexed and wrapped with cloth. The blankets, shirts, belts, and tunics worn in everyday life were placed on the corpse, and the hair, at least of females, was done up in small braids. Everywhere, multiple burials were common.

Grave furniture.—The grave furniture was reasonably abundant, particularly in nonceramic artifacts. Frequently, miniature copies of artifacts were especially made for burial purposes.

MANUFACTURES

Owing to the excessive dryness of much of this area, even normally perishable objects are often preserved, and, consequently, the collections of manufactured objects are unusually rich and varied. Influences from neighboring cultures with which the *Atacameño* were in contact are clearly reflected in the various crafts, in some instances so much so that the determination of the indigenous *Atacameño* pattern is difficult. In general, wooden artifacts present the most distinctive characteristics, both in variety and skill of manufacture, but certain distinguishing features are found in each of the major crafts. In this review, the artifacts described in the published reports and represented in museum collections are summarized under 10 major headings.

Ceramics.—Pottery is found in reasonable quantity in all the *Atacameño* Periods. In the North Chile area, some authors credit the introduction of ceramics to Tiahuanaco influence, but this view is not confirmed by the finds at La Paya in Northwest Argentina. Furthermore, the recent excavators on the North Coast of Chile place the Tiahuanaco style in a comparatively late position and make it clear that certain ceramic groups antedate it. For example, the earliest ceramics found by Bird (1943 and this volume, p. 587) at the Coast site of Pichalo show no Tiahuanaco influence and, for that matter, have little resemblance to the so-called *Atacameño* style in spite of the fact that a few nonceramic artifacts of this culture are associated. Plain, undecorated, open bowls, characterized by thick rims, are typical. The ware is plain red or brown and, in general the style seems early. Tiahuanaco graves have been isolated in the Río Loa region, representing a relatively pure Decadent Period style. These ceramics, likewise, bear little relationship to the *Atacameño,* and quite possibly represent an actual intrusion from the Bolivian Highlands. In brief, the whole problem of *Atacameño*-Tiahuanaco interrelationship has yet to be solved.

Much of the true *Atacameño* pottery is undecorated utilitarian ware, although a small percentage is painted with simple designs. The vessels are usually well fired and durable, but rather thick and not always symmetrical. The most characteristic shapes are open bowls (pucos), commonly hemispherical in cross section although other variants are found: asymmetric or boot-shaped vessels; one-handled globular cups; simple globular ollas with two horizontal or vertical body handles; elongated vases with straight collars; one-handled pitchers; and characteristic globular-shaped bowls with flaring collars, vertical side handles, and truncated conical bases. These shapes are common in the Río Loa region and, with the exception of the last two, are also characteristic of the *Atacameño* Period at La Paya.

The plain-ware vessels are muddy red or unpolished black in color (pl. 129, *b-h*). The painted designs are generally executed in black on red, or black and red on a white slip base (pl. 129, *a*). Simple geometric designs predominate. At La Paya, series of superimposed angular lines are the most frequent pattern, although cross-hatched areas and other simple geometric figures occur. In the Río Loa region, the most common design elements are steps, triangles, parallel lines, rows of dots, and combinations based on all of these.

The so-called Chincha-*Atacameño* pottery is found in great abundance in all of north Chile, even including the Coast, and represents the Late Period. The *Atacameño* ceramic shapes persist, but there is much greater emphasis on flat-based vases and jars and on one-handled pitchers. Painted ware is more abundant, and the designs, although still essentially geometrical, are more intricate. The vessels are covered with a red slip and painted in black plus other colors. The most typical small-unit designs, are hooks, serrations, meandering lines, zigzags, rhomboids, frets, triangles, Z's, small stylized animals, and human figures. Such units are arranged in many combinations, and cover most of the outside surface of the vessels. It is this ceramic design style that has suggested influences from the South Coast of Perú, where the *Chincha* are traditionally supposed to have resided.

Polished black-ware goblets, bottles, and plates occur in many sites (pl. 129, *i*). This ware has been isolated in some graves, but most scholars consider it as a variant on the Chincha-*Atacameño* style, rather than a distinct period.

Wooden objects.—Artifacts of wood are well preserved, and many of them have been treated as diagnostics of the *Atacameño* culture wherever found. The most characteristic of these are the carved tablets and tubes for taking snuff, toggles, bells, decorated spindle whorls, combs, agricultural shovels and curved knives, wooden knuckle-dusters, spoons, paint boxes of various shapes, and the so-called "prayer books."

Wooden tablets.—The flat wooden tablets are rectangular and have a rectangular cavity on one face. One end may be adorned by one or more carved wooden handles, but tablet and handles are always carved from a single piece of wood. Decoration is common, including the carved-figure handles, surface incision, and shell inlay. Some of the incised designs are of pure Classic Tiahuanaco style, and correspond to stone tablets, similar in shape and ornamentation, which have actually been found at the site of Tiahuanaco in Bolivia. In the early literature, these tablets are frequently called "tabletas de ofrendas," since it was thought that they had been used for making offerings. Today, it is generally conceded that they were used for grinding snuff, possibly tobacco, but more probably parica (pl. 132).

Tubes.—Tubes for taking the snuff through the nose accompany the grinding tablets (pl. 132). These may be made of wood, bone, or cane, or combinations of any two of these materials. All have shaped conical nose pieces and slender, cylindrical tubes, which are often ornamented with relief, or overlaid with gold leaf. Both nosepiece and tube are commonly carved from a single piece of wood. Again, in the earlier literature, the designation "escarificadores" is used, because small bundles of thorns are sometimes found inserted in the tubes, and these were thought to have served for scarification or tattooing.

Toggles and bells.—The wooden toggles (pl. 131, *h*)[2] which were used as cinch buckles for llama harness, are so numerous in the graves that one author has estimated that there must have been at least one pair of llamas for each family. The toggles are simple V-shaped wooden pieces with knobs at the end for attaching the cinch straps. Wooden bells have a number of wooden clappers from 5 to 7 inches (about 13 to 18 cm.) in length and were probably hung on the necks of the lead llamas in a pack train (pl. 131, *f*, *g*).

Weaving implements.—A number of wooden implements are associated with the spinning and weaving arts (pl. 134, *a–e*).[3] These include such standard items as flat weave swords, short weave daggers, and perforated, pointed needles which served both for weaving and netting. Simple spindle shafts and a great variety of wooden whorls are also numerous. Some of the whorls are plain or incised wooden disks. Others have been elaborately carved to represent a cluster of circles, star shapes, rectangular forms with projections, and the like. Some of the whorls are elongated into a curved oval shape, similar to the metal and bone whorls made by the *Diaguita*. Decorated, rectangular wooden box covers with holes for lashing along the side may possibly represent the covers of workbaskets like those found in Perú. The rare decorated wooden stamps which have been found may have been used for decorating cloth. Both single-and double-edged combs are characteristic of *Atacameño*, with some evidence that the single edge is earlier (pl. 134, *h*, *i*). These may have been ornaments, but equally likely they were used to card wool. They consist of a number of flat cane or thorn spines bound with decorative thread between two thin rectangular slabs.

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[2] *Explanation of Plate 131:*

Miscellaneous artifacts from North Chile. *a*, Stone hammer or maul; *b*, *c*, stone-bladed cultivating tools; *d*, wooden cultivating (?) tool; *e*, wooden spade; *f*, wooden llama bell; *q*, wooden clappers for bell; *h*, wooden toggles for llama cinch; *i*, bow; *j*, quiver with carrying core and string for securing bow; *k*, arrow, cane shaft painted black, green, and red, forepiece wood, point missing; *l*, arrow, cane shaft, forepiece wood, point of stone; *m*, arrow forepiece, wood with stone point; *n*, arrow, wooden forepiece with tip encircled by cut so it will break off in wound, suggesting use of poison. All from Chiu-chiu except *b* (Pica Valley) and *d* and *e* (Chuquicamata). (Scale: *j* is 20½ inches (52 cm.) long.) (Courtesy American Museum of Natural History.)

Agricultural implements.—Among the agricultural implements (pl. 131, *b–e*) are plain, hardwood digging sticks and several types of wooden shovels. A common shovel has an elongated rounded handle and an oval flat blade, and is cut from a single piece of wood. Sometimes the blade has an attached handle grip in the center. Wooden handles for hafting stone hoes and shovels are numerous. The most distinctive agricultural tool is a heavy, curved wooden knife with a special cut-out handle grip, which was probably used for breaking up large clods of earth.

Weapons.—Wood was employed for making much of the hunting and fishing gear, such as bows, arrow points, and arrow foreshafts (pl. 131, *i–m*). Likewise, the harpoon foreshafts were generally of this material, and, rarely, single-piece fishhooks were carved out. For warfare, long wooden lances have been found, and also wooden knuckle-dusters, both with and without projecting points, which are similar to the metal specimens used by the *Diaguita*.

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[3] *Explanation of Plate 134:*

Miscellaneous artifacts, North Chile. *a*, Wooden weaving sword; *b*, spindle, oval wooden weight; *c*, spindle, conical wooden weight, wool yarn; *d*, spindle, pottery weight, wool yarn; *e*, bone weaving dagger; *f*, leather sandal, associated with Arica I and II pottery; *g*, leather sandal, Late Coastal type (historic?); *h*, single-edged comb, associated with Pichalo II pottery; *i*, double-edged comb, associated with Arica I and II pottery; *j*, copper knuckle duster; *k*, copper or bronze knife, rush wrapped handle, post-Spanish; *l*, copper chisel (?); *m*, mold of pottery for casting copper, designed to form three objects at one time; *n*, wooden frame with flat leather pouch underneath; *o*, *p*, flat wooden tablets covered with leather, unknown use; *q*, ceremonial arrow, with padded leather end; *r*, ceremonial object of leather reinforced with wood, teeth of cat face carved from bone; *s*, ceremonial arrow with broken shaft. On the end is a catlike hand of leather with anterior portion of small cat skull inside, the teeth exposed. On shaft is a wooden ball. Specimens *b*, *m*, *n*, *o-s*, from Chiu-chiu; *a*, *c*, *d*, *e*, *l*, from Cobija; *f*, *i*, from Pica Valley; *g*, *k*, from Arica; *h*, from Lasana near Chuquicamata; *j*, from Copiapo. (Scale: *a* is 20 inches (50.8 cm.) long.) (Courtesy American Museum of Natural History.)

Household objects.—Some wood objects, like pins, short awls, bowls, and spoons, fall into the general category of household equipment. The spoons are usually of large size with the bowl rim either flush with or raised slightly above the handle (pl. 133, *g*, *i*, *j*, *k*, *l*). Wooden spatulas are shaped like the bone ones. Wooden goblets, or keros, are associated with the *Atacameño* Periods everywhere. Some are plain in shape, others have raised bands around the middle, and on a few a carved figure projects above the rim. Geometrical incision is the characteristic decoration, although color painting of the lacquer type is also represented.

Miscellaneous.—Among the miscellaneous other artifacts, small, leather-covered wooden boxes, used as paint containers are characteristic (pl. 133, *e*, *f*). These are rectangular or cylindrical, some have two or more sections, and many are carved or incised. The covers are made of leather, or more rarely of wood, and a shelf is cut out to receive them. Red, yellow, white, black, vermilion, and green paints have been found inside these boxes. Simple wooden figurine, averaging about 9 inches (23 cm.) in length, have been found in some *Atacameño* sites. The carving on these is simple, and they may have served as idols or simply as dolls. Another characteristic artifact of unknown use consists of a small rectangular piece of highly polished wood, about 3 by 4½ inches (8 by 11 cm.), pierced along one side and sewn into a leather cover which wraps around it several times. In the Río Loa region these are locally called "prayer books" (pl. 134, *o*, *p*). A unique item is a small wooden ladder frame, covered with leather on one side, which may possibly have been a box cover. A wooden drum and drumstick were found at La Paya.

Basketry.—Coiled basketry is typical of the *Atacameño*, and, in reality, about the only major technique employed. Basketry plates and cuplike containers are the most frequent shapes (pl. 130, *g*, *h*). They are well made and usually decorated with red and black painted designs of simple steps, triangles, crosses, and stylized human and animal figures. A truncated cone of coiled basketry formed a base for a hat, which was then decorated with colored wool fibers in step and scroll designs executed in black and red on a cream base. A large hamper, or carrying basket, with a forehead tumpline strap was made of fibers intertwined on a frame base of three bent sticks. These hampers were occasionally used for infant burials. In the early Coast periods, basketry fibers were plaited into breechclouts and mats for wrapping mummies. A basketry sheath for harpoon points is an unusual artifact. In *Inca* times, and perhaps earlier, rectangular workbaskets were made in a splint technique.

Weaving.—*Atacameño* weaving, although competent, was definitely limited in techniques, designs, and varieties of colors, in comparison with the Coastal Peruvian periods. For the most part, only wool fibers were used in weaving. The natural selected colors of the wool were utilized and, rarely, the fibers were dyed blue, green, yellow, or red. Warp face, or repp, and warp pattern are the commonest techniques, but there are also some simple embroidered bands, round braids, and velvet or pile knot techniques. Among the principal woven objects are long belts with double-face warp pattern designs, rectangular blankets of thick material, ponchos, and shirts like narrow ponchos with the sides sewn except for the arm slits. The shirts are both sleeveless and with short sleeves, the latter probably slightly later in time. Other common objects are small bags, decorated in warp pattern technique, hemispherical hats with velvet designs, and slings of wrapped weave, slit in the center, and with round braid cordage in each end.

Leatherwork.—Extensive use was made of skins and leatherwork. (See pl. 134.) Rawhide cords are common, and as many as six strands have been twisted into thick cables. Sandals are made of cut-out soles, either single or double, with holes for the lacing straps which went over the toes and around the heel. Leather shirts are cut from well-tanned guanaco or vicuña skins, some with the hair left on. Light patches are sewn on the black skin for decoration. Some of the thicker leather shirts, long enough to protect the chest and the back, probably served as armor. Skins of pelicans and other birds are sewn together as capes. Caps are made not only of bird skins but also of viscacha, chinchilla, and otter.

Small leather bags for paint or lime are characteristic of the *Atacameño.* Some of these are made of a circular piece of tanned leather bunched into a bag and tied. Others are unaltered animal scrotums (pl. 133, *c*). The arrow quivers are made from a section of animal leg skin, sewn at the bottom only, with a carrying strap attached. The hair is generally not removed from these. Leatherwork is also employed in making the tops of the boxes and the wrappings for the so-called "prayer books" mentioned under Wooden Objects (p. 614). Rough pieces of leather served as bags for collecting copper ore. In one collection, a leather mask is adorned with teeth and crossed fangs of bone (pl. 134, *r*). Short reed sticks have modeled leather animal heads on one end, and may well have been used by shamans.

Metallurgy.—Copper is the principal metal (pl. 134, *j–m*), although objects of gold and silver are also found. In the Late Periods, tin is added to the copper to form bronze. The large surface copper deposits in North Chile had undoubtedly been utilized by the Indians for a long time, and remains of primitive smelters have been uncovered. It is difficult to distinguish *Atacameño* metal objects. Although the collections present a great variety of pieces, most of them are of types generally considered characteristic of *Diaguita* or *Inca* workmanship. This similarity may have resulted from strong *Diaguita* and

Inca influence on *Atacameño* metallurgy, but it is also possible that many of the metal objects were obtained by trade with their neighbors.

Copper tweezers for plucking the beard, and small chisels are found in most *Atacameño* sites, but they have no particularly distinguishing characteristics. Common ornaments of *Inca* and *Diaguita* types include copper pins (tupu), rings, bracelets, ear rings, arm bands, both plain and decorated plaques, and small rattle bells. The ceremonial and utilitarian metal axes, and the curved-bladed knives (tumi), are also of foreign types. Large cowbells with clappers, and knuckle-dusters with pointed projections are similar to the wooden artifacts previously described. Stone molds for casting are found in *Atacameño* collections, so that at least some of the pieces are of local manufacture.

Stonework.—Stone artifacts are numerous but none of them is especially distinctive. Most are of common utilitarian types, such as hammerstones, particularly heavy ones for mining copper, shovel or hoe blades, whetstones, and various styles of arrow, lance, and dart points. Small stone pestles for grinding paint are interesting in their comparison with somewhat similar clay specimens found at La Paya and at Mojos, in interior Bolivia. The preceramic periods on the Coast of Chile have their own series of typical stone artifacts, but the identification of these periods with the *Atacameño* culture has not been established.

Bonework.—Bonework, like stonework, is more characteristic of the early Coastal cultures than of the developed *Atacameño*. However, a number of objects are made from bone, among which the spoonlike spatula is the most outstanding (pl. 133, *h*). These spatulas are flat on both sides with one end pointed and the other carved into a spoonlike bowl. They are highly polished, and commonly decorated with incised circles filled in with black. Some have cut-out animal figures along the edges. Other bone artifacts are snuffing tubes, box containers (pl. 133, *d*), pointed basketry tools, flutes, arrow points, harpoon barbs, perforated needles, beads, and amulets. With the exception of the decorated spatulas, none of these is particularly characteristic of the *Atacameño*.

Calabashes.—Calabash bottles and hemispherical bowls are common in the collections. Many of these are decorated with pyrography (pl. 130) in geometric designs or rows of small stylized birds and reptiles.

Miscellaneous.—Thorn needles with pierced eyes are found and also wrapped bundles of thorns were inserted in the ends of the snuffing tubes. Hollow seeds with small pellets inside were used as rattles.

WEAPONS AND WARFARE

For the Late Periods, there is some evidence that the *Atacameño* were quite warlike, since their villages are usually fortified, and some constructions appear to be specialized forts. Also, weapons are numerous, and leather doublets and helmets were used for armor. The principal weapon was probably the bow and arrow, although many of the bows found seem too small for effective use in warfare. Typical bows are usually less than 1.10 m. (about 3½ feet) in length, and many are permanently curved. The bows are not notched for the twisted sinew strings. The arrows are also small, averaging about 24 inches (60 cm.) in length, with points of hardwood or flint. They are notched, have two feathers, and their reed shafts may be painted with white, yellow, red, or black bands. The arrows were carried in skin shoulder quivers. Other weapons are lances made of hardwood, stone-headed clubs, knuckle-dusters both of wood and of metal (pl. 134, *j*) for close-up fighting, slings, and perhaps bolas in the Late Periods. There is no doubt that the sling is old in North Chile, and evidence from the Coast demonstrates even greater antiquity for the bola.

SOCIAL AND POLITICAL ORGANIZATION

Virtually nothing is known of the social and political organization of the *Atacameño.* The nature of the terrain would limit communities to a relatively small size, and isolate them in the rare oases. The relationship of the families within a community is uncertain, although a Spanish document mentions that villages were composed of related families under a chief. It is also stated that the chieftainship was inherited via patrilineal descent and primogeniture. This, together with a vague reference to totems symbolic of the founders, would suggest some form of clan organization.

It is doubtful that any widespread political authority existed in a region of such widely separated inhabitable areas. Evidence of local differences of culture within the *Atacameño* region supports this view. Furthermore, the building units are not of a size to require a large well-organized laboring group. The irrigation projects, the villages and forts, although respectable, are not comparable to the large-scale contructions of the Central Andean region.

THE ARTS

Musical instruments.—The only information about music comes from the instruments themselves. The panpipes of six tubes is said by some to be characteristic of the *Atacameño.* A few specimens have been recovered, and some of the carved wooden figurines are depicted in the act of playing panpipes and flutes. The bone end-flutes have four notes. At La Paya, Ambrosetti uncovered an ovoid-cylindrical box, 20.5 cm. (about 8 inches) in height and 12 by 20 cm. (about 4½ by 8 inches) in diameter, which had once been covered with skin and used as a drum. A drum stick, carved with faces, was found in the same grave. Rattles, bells, and a trumpet are still other *Atacameño* instruments.

Petroglyphs.—Petroglyphs of simple animal and human figures are common in North Chile and Northwest Argentina, and some of these undoubtedly pertain to the *Atacameño* Periods. Also, rock caves are described which have painted walls with designs like the petroglyphs.

Art.—The only outstanding art achievement is in woodcarving. This has already been mentioned in the descriptions of the snuff tablets and tubes, the paint boxes, the wooden whorls, and other wooden artifacts. Otherwise, the decoration of the bone spatulas, the pottery, and the textiles, is competent, but not outstanding. Some decorative work was done with bird feathers, tufts of fur, and the sewing of white fur patches on black leather backgrounds. Still other techniques are incision, inlay work with shells, dyeing, and some painted design.

RELIGION

Knowledge of *Atacameño* religion is based on indirect, archeological evidence, and even this is limited. None of the stone construction units appears to represent a temple or other religious type of building. The ceramic designs are neither pictorial nor symbolic, and are, therefore, of little use in interpreting religion. Some objects have been found, such as leather demon masks, llama feet pierced with arrows, and reed shafts with modeled leather heads, which may have religious connotations, or at least refer to shamanistic practices. Elsewhere in South America, the use of parica as snuff is generally associated with religious practices.

The careful attention to the preparation of graves and corpses is indicative of considerable interest in the deceased. The types of burials have already been described, but one type of burial chamber deserves special mention because of its resemblance to a type of family mausoleum which is said still to exist in North Chile. Today, it is claimed, the underground chamber has a table placed in the center around which the mummies of the deceased are grouped. A member of the family who is seriously ailing is carried to the chamber, seated at the table, and surrounded by offerings of food and gifts. A ceremonial dance is then given by his relatives in order to help him "die well." Once a year these mausolea are opened, the food and other offerings are renewed, and the death dance is repeated. This ceremony may possibly reflect an ancient practice.

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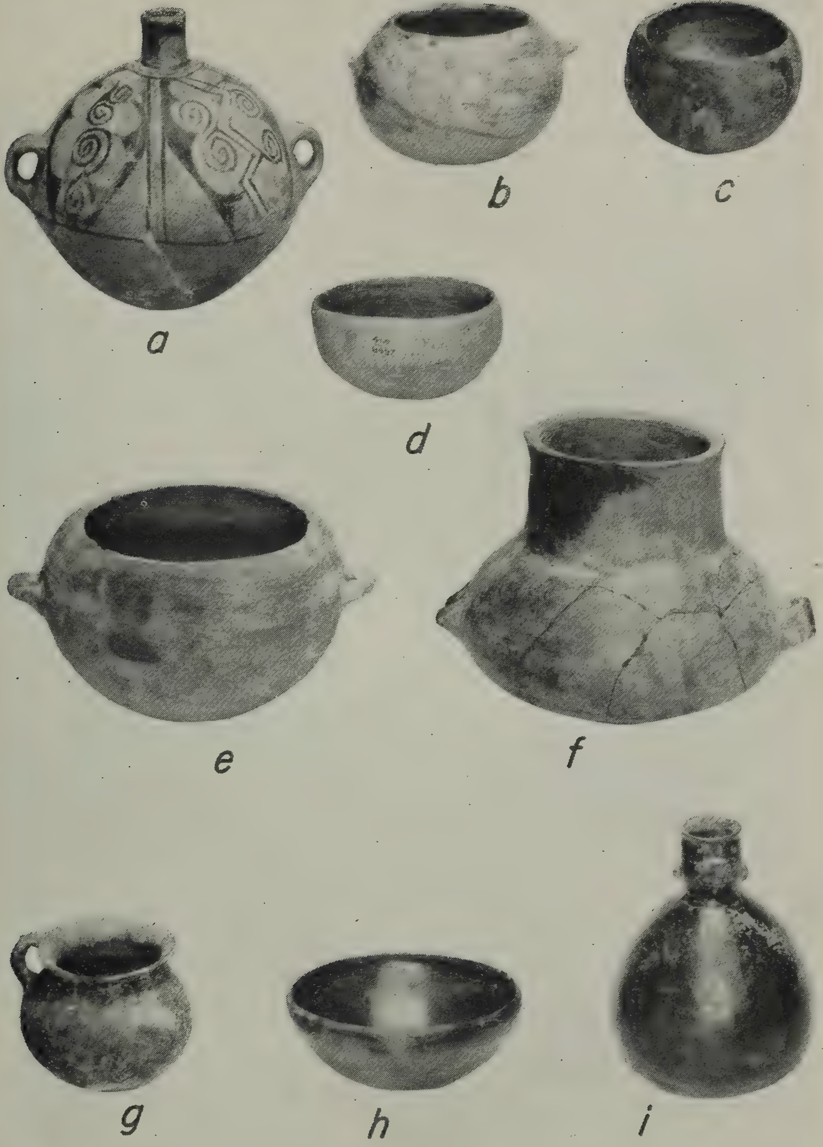

Plate 129.—**Atacameño pottery.** *a*, Red-and-black on white slip. (Height: 8½ inches (21.5 cm.).) *b*, Red-brown ware with black paint smudges. (Diameter 7 inches (17.8 cm.).) *c–g*, Red-brown ware. (Diameters, 5, 5½, 10, 10, 4¾ inches (12.7, 14, 25.4, 12 cm.).) *h*, Brown to black polished ware. (Diameter 6¾ inches (17 cm.).) *i*, Polished black ware with modeled face on collar. (Height: 7½ inches (19 cm.).) All from Chiu-chiu except *c* and *f* which are from Chuquicamata. (Courtesy American Museum of Natural History.)

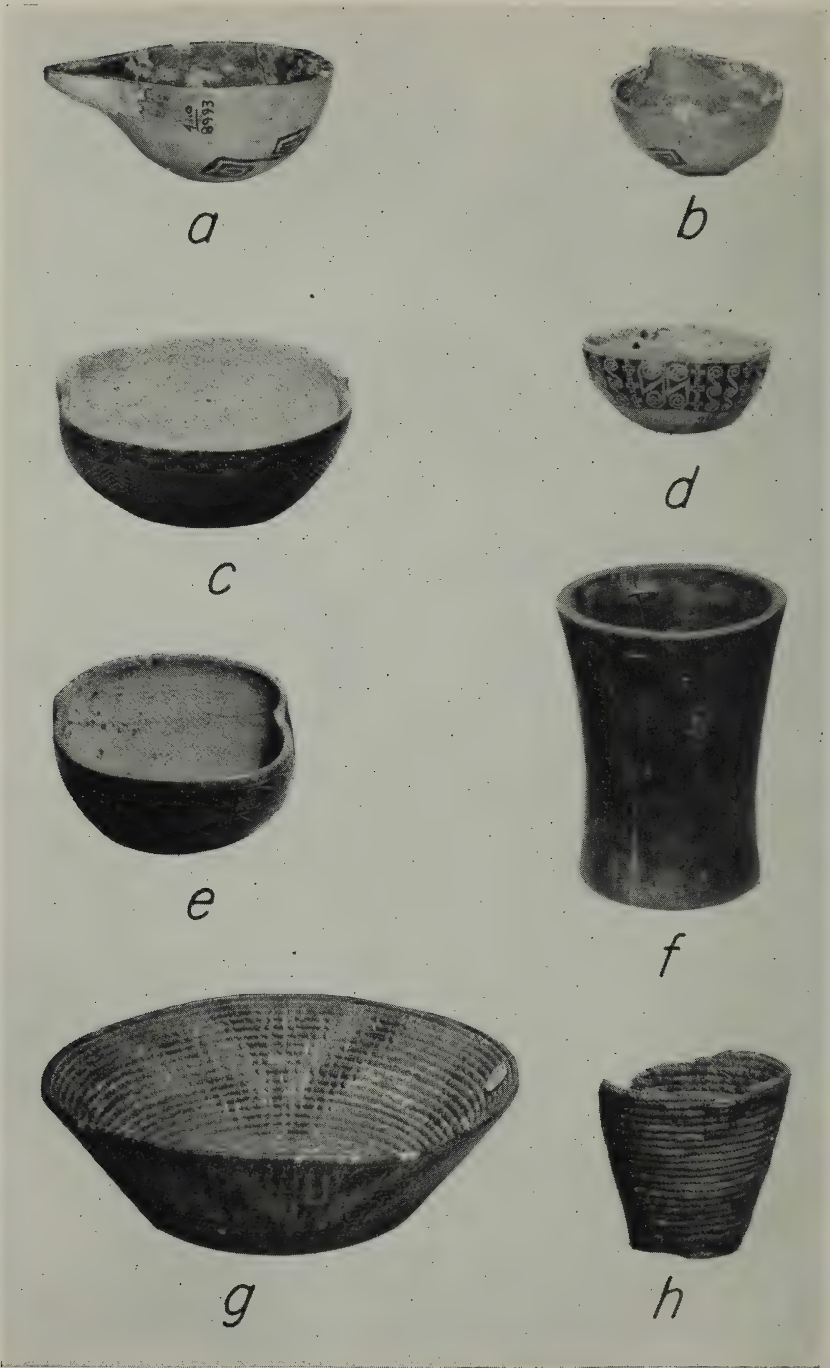

PLATE 130.—**Miscellaneous Atacameño manufactures.** *a*, *b*, A gourd container. (Width 3¼ inches (8.3 cm.); length 4 inches (10 cm.).) *c*, *e*, Pyrograved gourd containers. (Width for each 4½ inches (11.4 cm.).) *d*, Pyrograved gourd container. (Width 3½ inches (8.9 cm.).) *f*, Wooden beaker, or kero. (Height 5½ inches (14 cm.).) *g*, Coiled basket. (Diameter 9 inches (22.8 cm.).) *h*, Cuplike coiled basket. (Height 4 inches (10 cm.).) All from Chiu-chiu except *f* which is from the Pica Valley. (Courtesy American Museum of Natural History.)

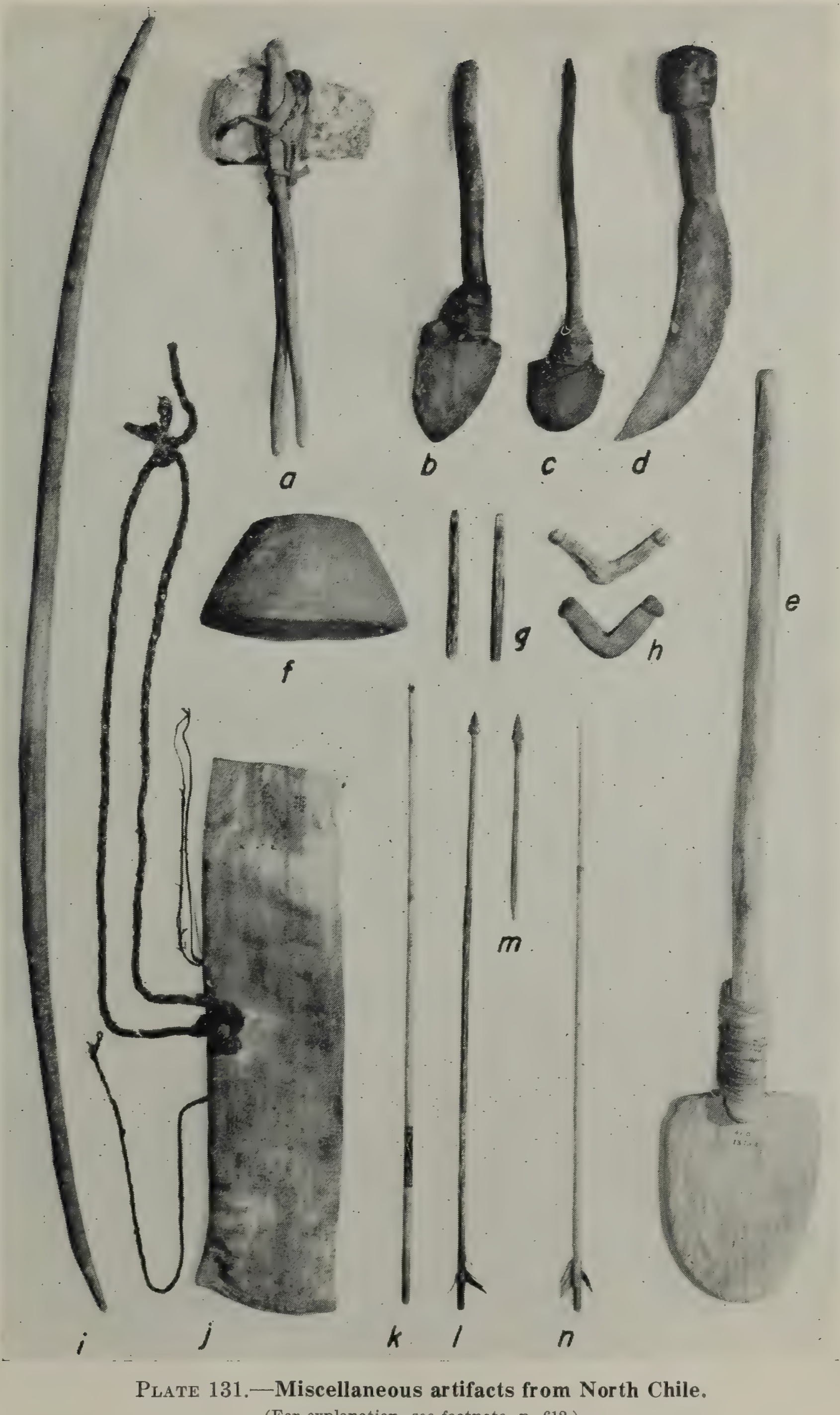
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PLATE 131.—**Miscellaneous artifacts from North Chile.**
(For explanation, see footnote, p. 612.)

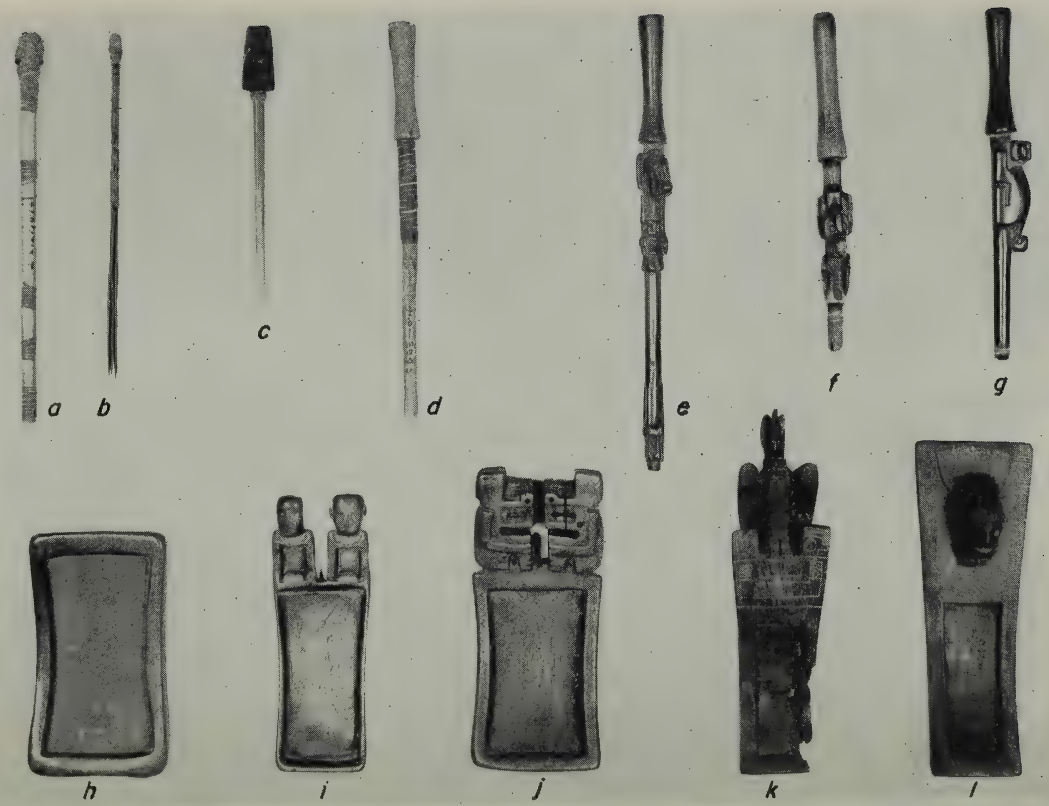

PLATE 132.—**Snuff tubes, and tablets, North Chile.** *a*, Cane wrapped with wool and sinew; *b*, bundle of seven carefully worked thorns found inside of *a*. Most snuff tubes have such bundles. *c*, Bird bone with wooden nose piece; *d*, cut from one piece of wood, repaired and reinforced with sinew lashing; *e–g*, elaborately carved tubes. The lower end of *f* repaired with sheet silver. *h–l*, Carved wooden tablets. Cats, condors, human figures as motifs. All from Chiu-chiu except *c* (Cobija) and *k* and *l* (San Pedro, near Chuquicamata). (Scale: *c* is 5 inches (12.7 cm.) long.) (Courtesy American Museum of Natural History.)

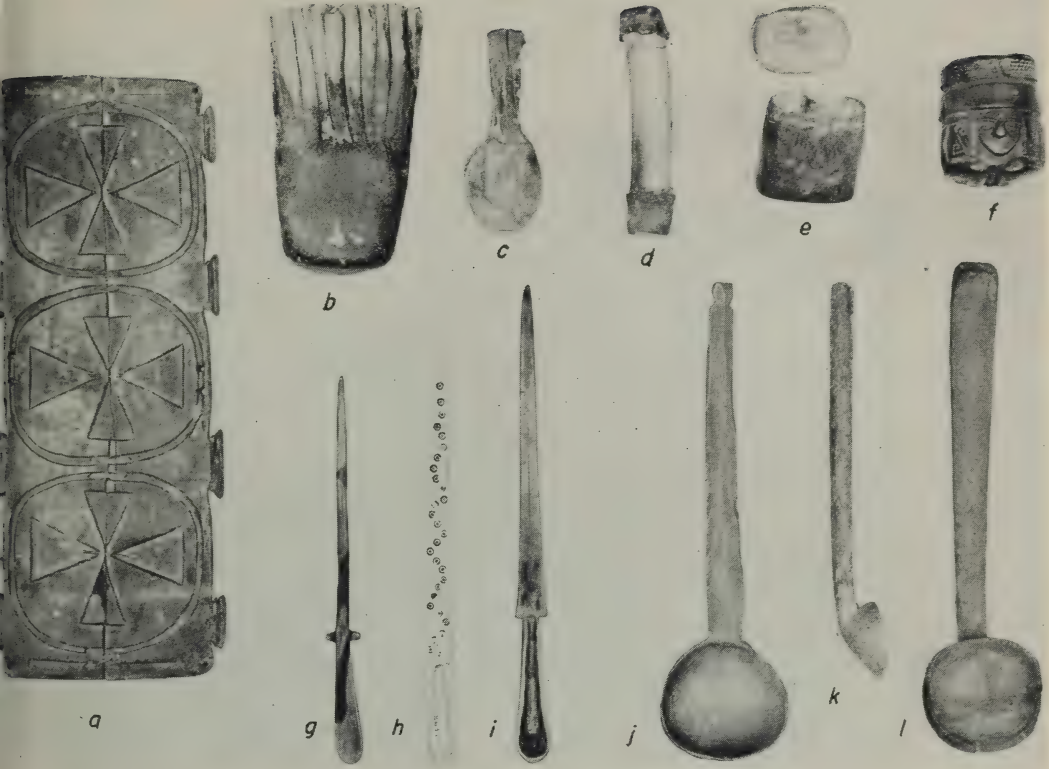

PLATE 133.—**Containers, spatulas, and spoons, North Chile.** *a*, Wooden box cover; *b*, leather pouch; *c*, scrotum-skin pouch; *d*, bone tube container, skin cover top and bottom; *e*, wooden container tilted to show two interior compartments; leather cover above; *f*, wooden container carved to represent seated human figure, with leather cover; *g*, *i*, wooden spatulas; *h*, bone spatula; *j*, wooden spoon, a type associated with Arica I and Arica II pottery on Coast but rare in interior. The top of handle is flush with rim of bowl. *k*, Wooden spoon with round handle, side view showing offset bowl; *l*, Wooden spoon offset bowl, rectangular handle. All from Chiu-chiu except *j*, which was found near Arica. (Scale: *a* is 11⅜ inches (28.8 cm.) long.) (Courtesy American Museum of Natural History.)

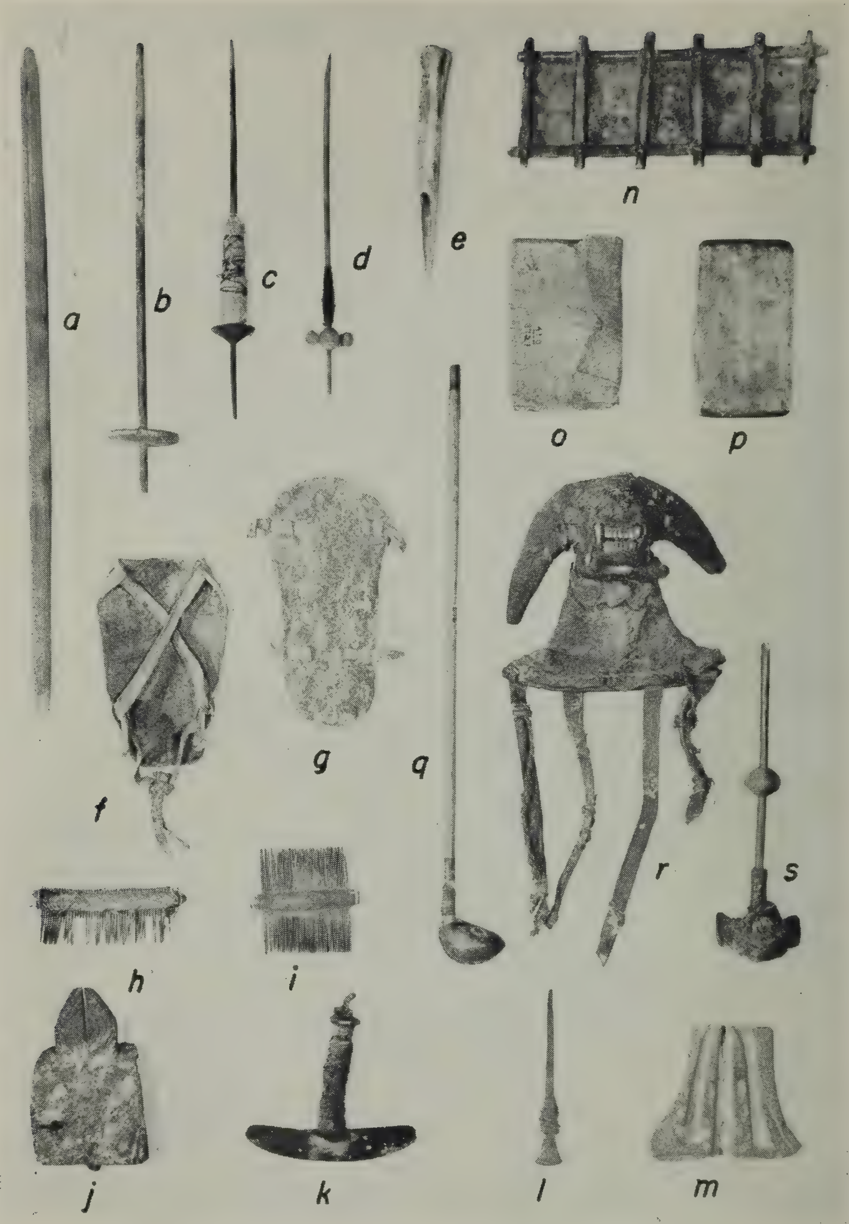
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PLATE 134.—**Miscellaneous artifacts, North Chile.**

(For explanation, see footnote, p. 613.)

THE CULTURES OF THE PUNA AND THE QUEBRADA OF HUMAHUACA

By Eduardo Casanova

INTRODUCTION

The extreme northwestern part of Argentina is a mountainous region comprising two distinct zones, the Puna and the Quebrada (map 1, *No. 9*). The first, known by the names of Puna de Atacama and Puna de Jujuy, is a high plateau or altiplano, with an elevation of about 11,300 to 12,000 feet (3,500 to 3,800 m.). The surrounding mountain ranges make this altiplano a closed basin traversed by small rivers that empty into the salt marshes, which are full of water only in the summer. The climate is continental and very dry, as only scarce rains fall except in January and February. Vegetation here is poor, and the most important species of fauna are the llama, vicuña, and guanaco. East of the Puna is the Quebrada de Humahuaca, a narrow valley 170 km. (about 100 mi.) wide, which slopes sharply from north to south, its upper end reaching an elevation of almost 13,000 feet (4,000 m.), while at the lower end, near the city of Jujuy, its elevation is only about 4,000 feet (1,200 m.). The Río Grande flows through this valley, giving it life with its waters. The climate varies with the altitude, being like that of the Puna in the north, and subtropical in the south. For this reason, vegetation in the neighborhood of Jujuy is luxuriant, but poorer upstream, where xerophytic plants (cardones and pencas) thrive. The latter tend to grow sparsely in the higher altitudes.

The entire area in pre-Hispanic times was rather well populated by native tribes of various names. On the Puna lived the *Casavindo*, *Cochinoca*, and others, called collectively the *Puneño*,[1] and in the Quebrada, the *Fiscara*, *Purumamarca*, *Jujuy*, etc., these being included in the group called the *Omaguaca* or *Humahuaca* (map 5). Information derived from historical documents and particularly from archeological discoveries has made it possible to reconstruct in part the culture of these peoples.

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[1] See Bennett on the *Atacameño*, this volume, p. 599.

CULTURE

SUBSISTENCE ACTIVITIES

Agriculture, the principal source of livelihood of these tribes, necessitated their overcoming the obstacles presented by scarcity of water and by stony, irregular land. To make the best use of hillside land, they made andenes, or terraces (pl. 136, *top*), for cultivation, building up the retaining walls with stones and removing the smallest pebbles from the soil. Typical examples of these stepped terraces can be seen in Sayate and Casabindo, on the Puna, and in Coctaca and Alfarcito, in the Quebrada. Most crops were "temporal," that is, entirely dependent on rainfall. However, in the Quebrada of Humahuaca, the natives irrigated their fields from the springs and streams by means of drains cut in the rock or built up with stones. Farming tools consisted of a hoe, shovel, and a large hardwood or stone knife; these implements had wooden handles (fig. 50). The main crops were maize, potatoes, quinoa, and beans (porotos). The first two were preserved in granaries (silos) that were generally built underground (fig. 51). The granaries had stone walls and a roof of large slabs forming a false arch. Other slabs were laid on the ground to keep out the dampness and rodents. On the Puna, grottoes or caves served as granaries.

Stock raising was highly developed although the only domesticated animal was the llama. The remnants of corrals prove that the herds were numerous. The llama was a great source of wealth to the Indians, being used as a beast of burden, as a food, and as a source of wool for weaving and of bones for making tools and ornaments.

Although engaged primarily in tilling the soil and tending their flocks, the pre-Hispanic peoples did not neglect the meager natural sources of food: In some sheltered areas of the Quebrada they gathered algarroba, gourds (calabazas), and cactus fruit (tunas), and, throughout the entire region, they hunted vicuña, guanaco, duck, etc.

HOUSES

Dwellings were built with dry-masonry walls of boulders or slabs, or, in some cases, of stones set on edge. No mortar or adobe was used, the stones being so skillfully laid as to remain in place. Doors were small. Occasionally, there were niches in the walls. Specially constructed tombs were made beneath the floor level, especially in the corners of houses. Roofs were made by placing log rafters across the walls and covering them with one or two layers of reeds, which were coated with a layer of mud mixed with straw. Such roofs kept out moisture for a considerable time. This type of construction is still used in the area, and is called techo de torta.

Dwellings were usually rectangular, the size rarely exceeding 16 square m. (about 170 sq. ft.). In some ruins, semisubterranean rooms have been discovered. Often several dwellings adjoin one another, but each has its own walls. In addition to the main dwelling, there are various smaller buildings, which were no doubt used as storerooms, kitchens, etc.

Except for a few isolated houses on the terraces, dwellings were arranged in two kinds of groups: the old villages (pueblo viejos) and the fortifications (pucaras) (pl. 135). In the first, houses were scattered irregularly in low sheltered dales or on little plateaus, and had no defense walls. Typical "old villages" are Coctaca and Los Amarillos. The pucara was a fortified village on the top of a hill, protected by the precipices and reinforced with thick walls to ward off attacks. Be-

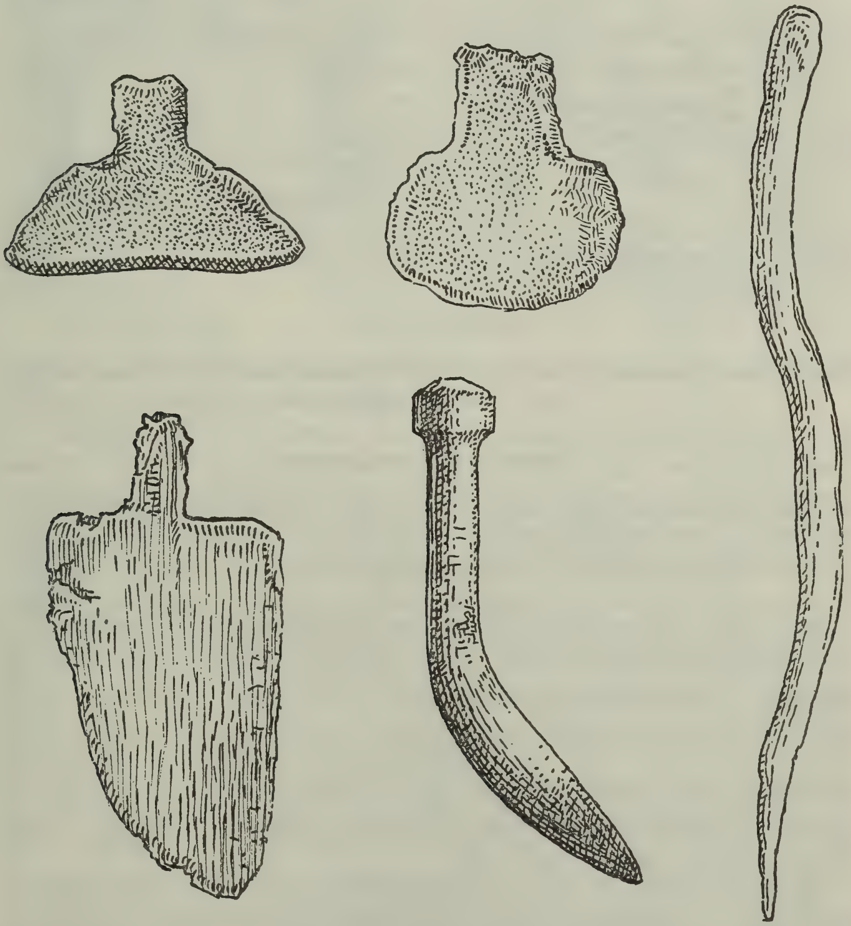

Figure 50.—Humahuaca instruments of stone and wood used in agriculture. (One-fifth actual size.) (Courtesy Museo Argentino de Ciencias Naturales.)

tween the houses, which covered nearly all the available surface, wound streets connecting the various sections of the village. In the Pucara of Tilcara in the Quebrada de Humahuaca there are roads up to 1,600 m. (about 5,250 feet) in length. Another famous example of a pucara is Rinconada on the Puna.

It has been proved that both types of sites were contemporary and were built by the same Indians. The people generally lived in the "old villages" which, being near the streams and cultivated terraces, made life easier. When war broke out, they took refuge in the pucaras, which sheltered them from attack and enabled them to rout the enemy.

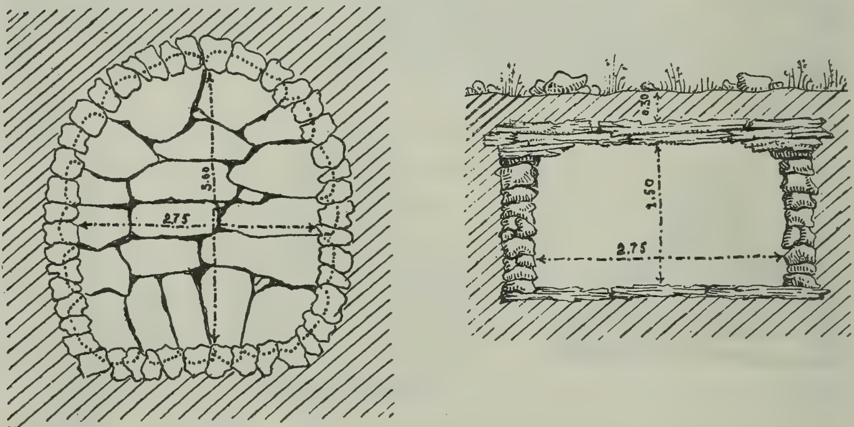

Figure 51.—Cross section and floor plan of a Humahuaca subterranean granary. (After Casanova, 1933, fig. 48.)

DRESS AND ORNAMENTS

The Puna has afforded more information on native clothing than the Quebrada, for mummies taken from tombs on the Puna have garments in good condition. Comparison of these with the chroniclers' descriptions, and with pictographs in Humahuaca, shows that similar clothing was worn in both regions. The typical garment was the shirt (the Peruvian "unco"), which had openings for the head and arms and reached to the knees and sometimes to the ankle. The fabric was light but firm, and was red or brown or had stripes of different widths in several colors. Other garments were ponchos, capes, or mantles (mantas), skirts, kerchiefs, and bags, the chief colors being red, yellow, green, and brown combined in geometrical designs. Llama and, less frequently, vicuña wool was used.

On the head they wore caps which covered the ears and the back of the neck. Occasionally, straw hats and headgear made of butterfly larvae have been found in the tombs. The hair was worn in a single braid more than 3 feet (1 m.) long, or was parted in the center and plaited into many small braids, the ends of which were tied with bits of string.

Footgear consisted of sandals (ojotas), that is, pieces of leather cut in the shape of the foot and fastened with thongs of the same material.

Ornaments were numerous: Brilliantly colored feathers held in place by woven kerchiefs or fastened in large wooden combs; and necklaces made of stone beads or beads of other materials such as nuts, bones, mullusk shells, gold, and silver. Rectangular and round plaques and disks of bronze, copper, silver, and gold were perforated for a cord by which they hung from the neck. Many specimens had zoomorphic and anthropomorphic designs carved in relief. Tupus (pins) for fastening garments were of bone or metal, with geometric or zoomorphic designs. Other ornaments were bracelets, kerchiefs, rings, plaques, little bells, etc.

Skulls were artificially deformed, nearly all those in the Quebrada Humahuaca having oblique tabulare (fronto-parallelo-occipital) shape, whereas those on the Puna are also of upright tabulare (fronto-vertico-occipital) and circular tabulare (circumferential) shape. In the latter area, there are instances of dental mutilation, the lower front teeth having rectangular gashes.

Certain anthropomorphic pottery figurines show facial painting and tattoo, but there are too few specimens for exhaustive study of this practice.

MANUFACTURES

These Indians utilized many raw materials for manufactures, some of them utensils, others ornaments.

Basketry.—The Quebrada has yielded only a few remnants of baskets, but the Puna affords many specimens which were preserved by the dry climate. The baskets are made with the coiled technique, and some were woven with two-color geometrical designs. Basketry specimens vary from large, round containers to simple mats, which served as covers.

Weaving.—Textile weaving was highly developed in both zones, although, because of the climate, almost all the specimens found come from the plateau (pl. 138, *bottom*). Many implements for weaving have been found: loom bars, spindles, spindle whorls, swords to tighten the weaving, combs for carding the wool, etc. Llama or vicuña wool was generally used in bright colors, preferably red, sometimes combined with other colors. Weaving techniques have not been carefully studied, but it is clear that there were distinct types of cloth, including both heavy blankets and fine ponchos with long fringes.

On the Puna, most burials contain many ropes made either of two-colored braided llama wool or of vegetable fibers, such as grasses.

These cords were used to fasten the loads carried by the llamas, to tie funeral bundles, and to make halters.

Ceramics.—Pottery specimens are much more abundant in the Quebrada than on the Puna. They generally are reddish in color, sometimes grayish black, and were made with the coil technique. Two types are: (1) coarse, heavy jars with thick, friable walls; (2) thin-walled, well-polished, beautifully decorated specimens, the finest examples of which are from Humahuaca. Although globular shapes prevail, some vessels are zoomorphic or anthropomorphic (fig. 52). Decoration consists of various geometrical designs painted in black (fig. 53) and, rarely, black and white, on a red background. A few pots have incised decoration. There are a few pots of superior quality, which probably came from neighboring regions, especially from Perú and from the other parts of Northwestern Argentina.

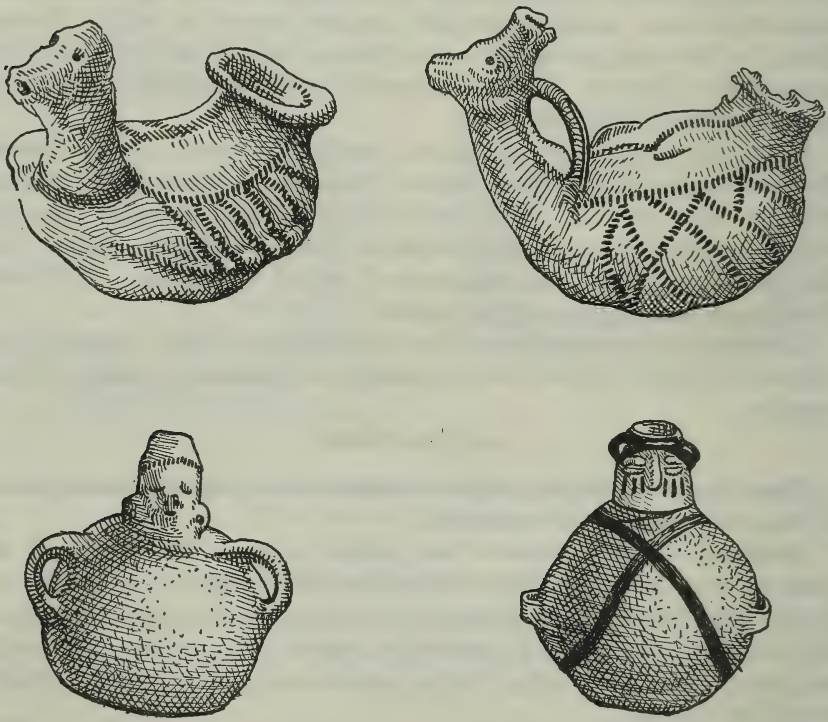

Figure 52.—Humahuaca modeled pottery. Zoomorphic and anthropomorphic forms. (One-fifth actual size.) (Courtesy the Museo Argentino de Ciencias Naturales and the Museo Etnográfico de la Facultad de Filosofía y Letras, Buenos Aires.)

Gourds.—Gourds are frequently found on the Puna but less often in the Quebrada. Cut in half, these served as jars, plates, and ladles. Some, which had only a small opening, were containers for ground chile, paint dust, etc. Many of these vessels had burned (pyrograved) designs (fig. 54).

Metals.—Metal specimens are not very numerous, and those which show advanced metallurgy were possibly brought from other areas. Copper and copper alloyed with tin were the chief materials used. Mines worked by the Indians in pre-Hispanic times have been discovered in Cobres on the Puna. The ore was crushed on marays (stone) tables and smelted in huayras (wind furnaces). Gold (pl. 138, *top*) and silver were used, especially in very thin sheets. The most common articles were axes, awls, chisels, knives, and needles of copper and bronze; and bracelets, rings, plaques (pl. 138, *top, left*), disks, and other ornaments of gold, silver, and bronze.

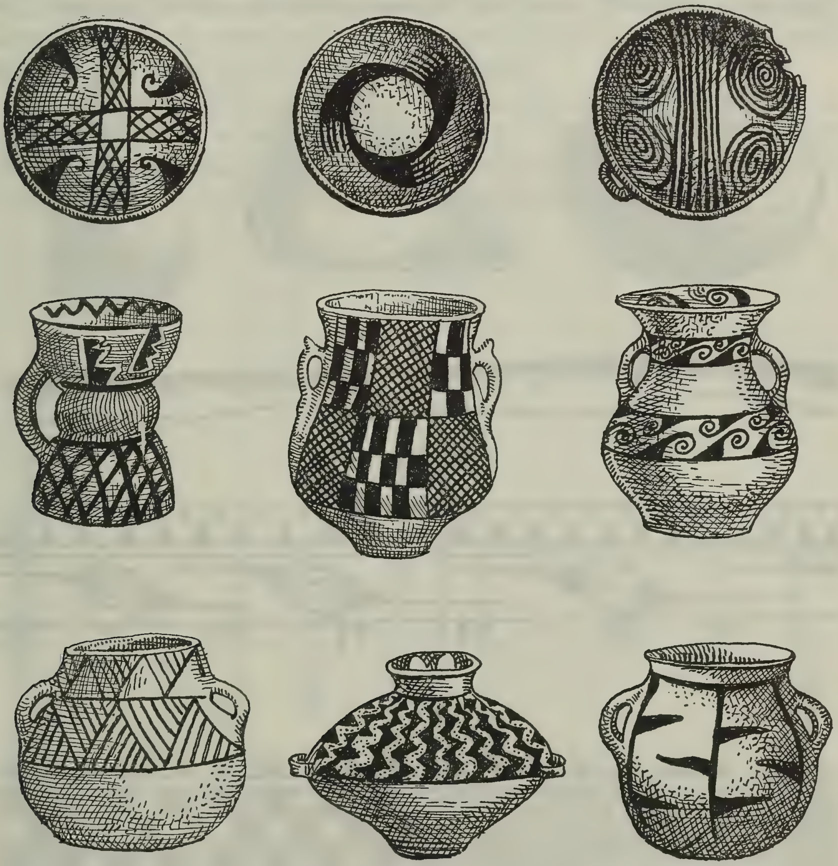

FIGURE 53.—Humahuaca pottery with painted black decoration. (One-fifth actual size.) (Courtesy the Museo Argentino de Ciencias Naturales and the Museo Etnográfico de la Facultad de Filosofía y Letras, Buenos Aires.)

Wooden objects.—Hardwood, obtained through barter, was used to make agricultural tools, bows and arrows, dishes, vessels, idols, pipes, tablets, etc. Stone, bone, and mollusk shells, some of the last from the Pacific Ocean, were also used for tools and ornaments.

POLITICAL ORGANIZATION

We know only that there were several tribes, each with its own chief (cacique) and that the tribes united in times of common danger, when certain chiefs dominated an entire region. Thus, Viltipoco ruled the Quebrada, and, with his allies, threatened the Spanish Conquest.

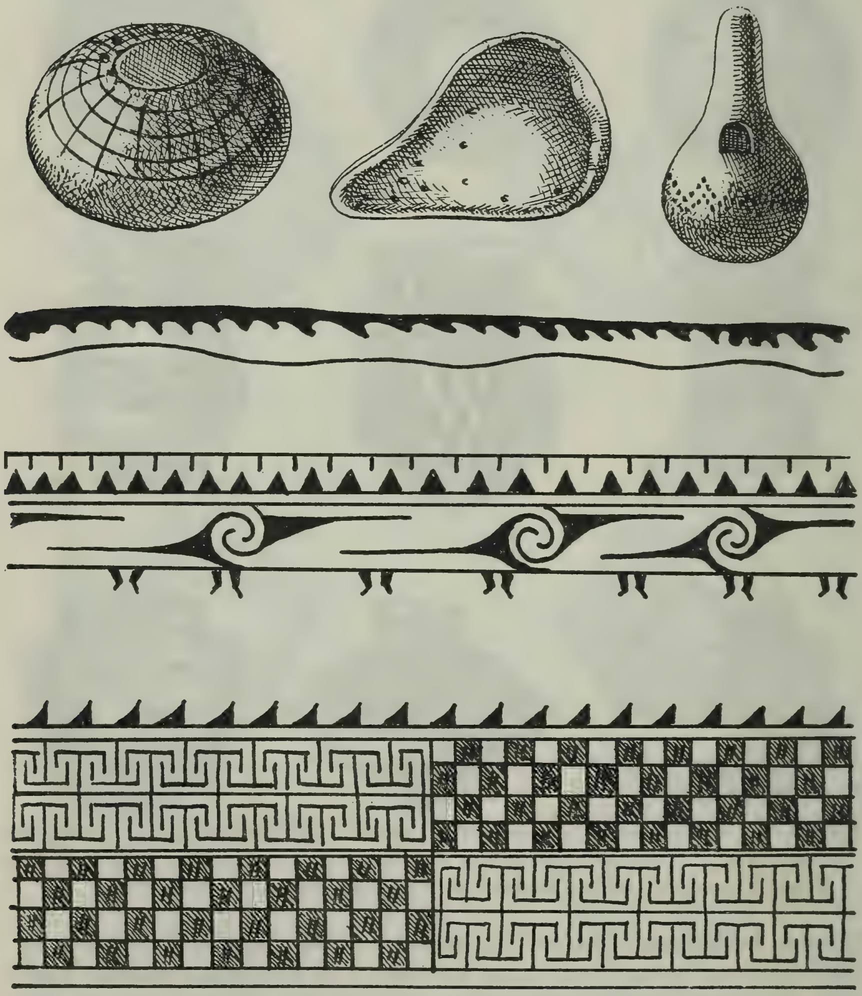

FIGURE 54.—Calabashes used as receptacles on the Puna. Ornamented with pyrograved geometric motifs. (Calabashes are one-half actual size and the bands of ornamentation are actual size.) (Courtesy Museo Argentino de Ciencias Naturales.)

WARFARE

Frequent wars with neighboring tribes and even between the local tribes created a warlike spirit, which was evinced in the bravery with which these people, particularly the *Humahuaca*, opposed the Whites and were overcome only after a bitter struggle. The cacique directed the war, with the advice of his council. Fighting by ambush and by surprise attacks was preferred, but, when on the defensive, the Indians took refuge in the pucaras, or fortifications. Watchtowers were erected on all the strategic hills. They stationed sentinels and used spies to learn the movements of the enemy.

Weapons consisted of bows and arrows (fig. 55, *left*) with heads of stone, bone, and wood, bolas (libes) (fig. 55, *center*), woven slings (fig. 55, *right*), spears, axes, and clubs, the last two usually of stone, although there are magnificent specimens of bronze.

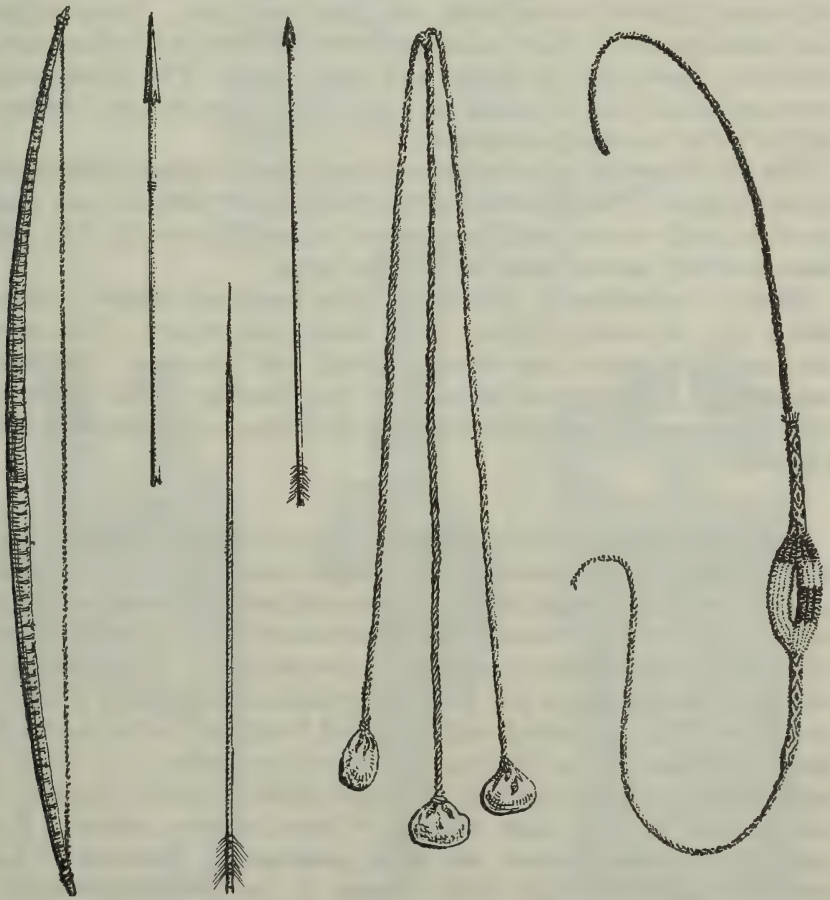

Figure 55.—Humahuaca artifact types. *Left:* Bow and arrows with points of wood and stone. *Center:* Bolas. *Right:* A woven sling. (All one-tenth actual size.)

Up to the time of the Conquest, it was customary to take trophies of war. After an enemy had been killed, his head was cut off, a hole was made in the cranial cavity, and the foramen magnum was enlarged. Then the head was fastened to the point of a lance or carried by means of a cord passed through the holes. This trophy had a great significance: The conqueror believed he had taken possession of the dead man's magic power; the skull was a mark of honor, as it proved his valor; and it was something on which he could inflict further injuries, thereby continuing his vengeance.

ESTHETIC AND RECREATIONAL ACTIVITIES

Art.—Painting reached its highest expression in pictographs, such as those of Chulín in the Quebrada, and at Rinconada (fig. 56) on the Puna. The latter, which covers 6 square m. (64 sq. ft.), has human and animal figures painted black, red, green, and pink. The straight-line technique used in these paintings gives a stiffness to the characters, which are shown both in profile and front views. The artists were more concerned with depicting clothing and ornaments than features, for the latter are always indistinct.

The art of carving stone, wood, and bone was not greatly developed in this region. The finest works are tablets and tubes of very hard wood, expertly carved with human and animal figures (fig. 57), and some skillfully carved stone and wooden idols.

Music.—Archeological discoveries have produced musical instruments (fig. 58) made of bone, wood, stone, and pottery. The most common instruments are whistles, flutes, and trumpets. Festivals consisted of gatherings at which there was dancing to the music of these instruments and much drinking of chicha, a fermented maize beverage.

RELIGION

Very little is known about religion. The chroniclers say only that these people had idols which they worshiped fervently. Archeological excavations have brought to light larger and better constructed buildings than the ordinary ones. These contained stone tables or altars, which may be considered temples or shrines for idols. In the fortified village of Rinconada on the Puna are cylindrical monoliths nearly 6 feet (2 m.) high, protected within special buildings. At crossroads, along roadsides, and on hilltops can be seen apachetas, i. e., piles of small stones purposely heaped up, before which even now the native Indians and Mestizos place offerings of coca leaves to assure a safe journey. On the steepest and most inaccessible places there are structures and materials which appear to have been sanctuaries. Among these ruins are anthropomorphic idols which doubtless were used as charms.

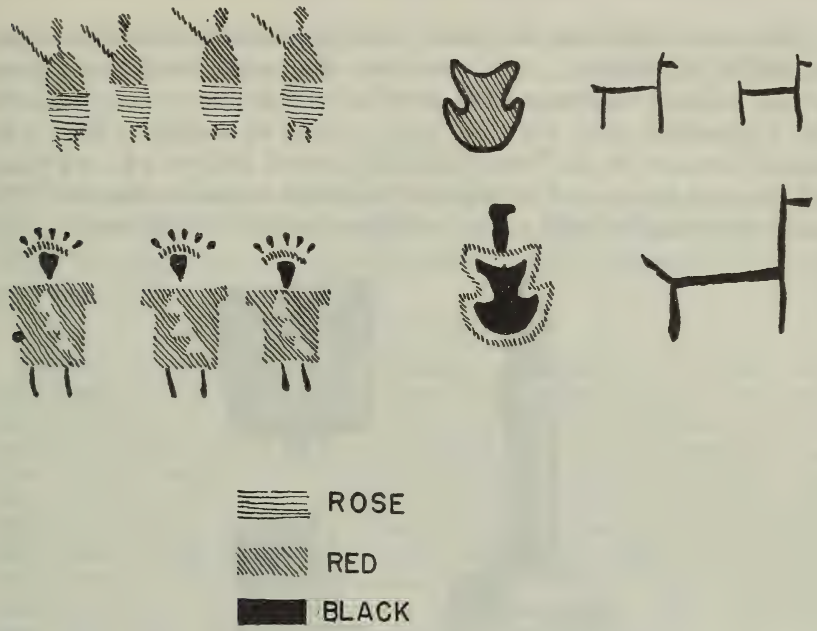

Figure 56.—Colored pictographic representations from Rinconada. (One-fifth actual size.) (Redrawn from Boman, 1908, pl. 61.)

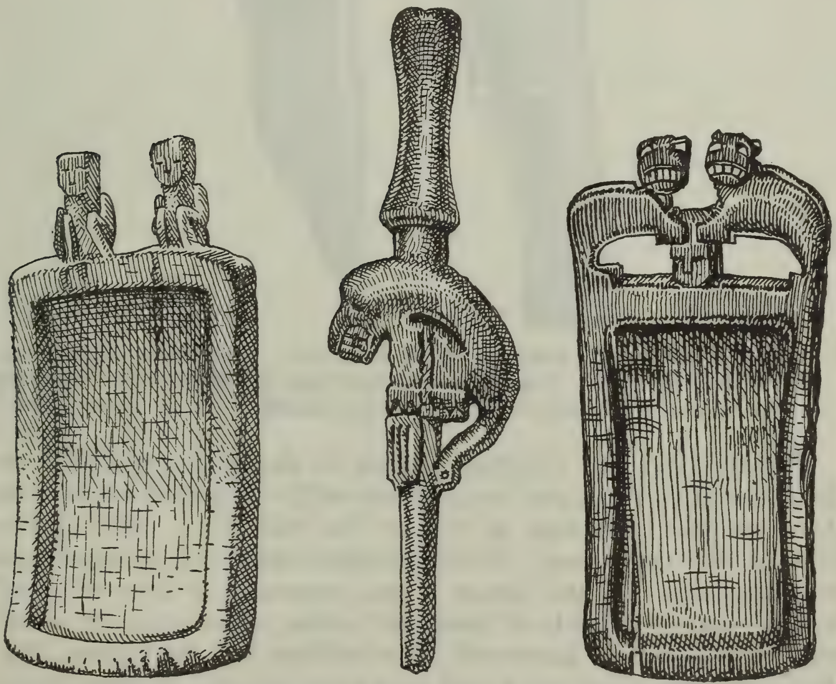

Figure 57.—Tablets and tube of wood. Decorated with zoomorphic and anthropomorphic figures. (Courtesy the Museo Argentino de Ciencias Naturales and the Museo Etnográfico de la Facultad de Filosofía y Letras, Buenos Aires.)

There are indications that these Indians practiced human sacrifice, especially of children. The discovery that some small boys were buried in urns, whereas others were interred in the ground, leads to the supposition that the first were victims of sacrificial rites. In Salinas Grandes on the Puna, the richly clothed body of a 6- or 7-year-old boy was discovered in splendid condition buried in the salt. He had been strangled with a rope which was still about his neck.

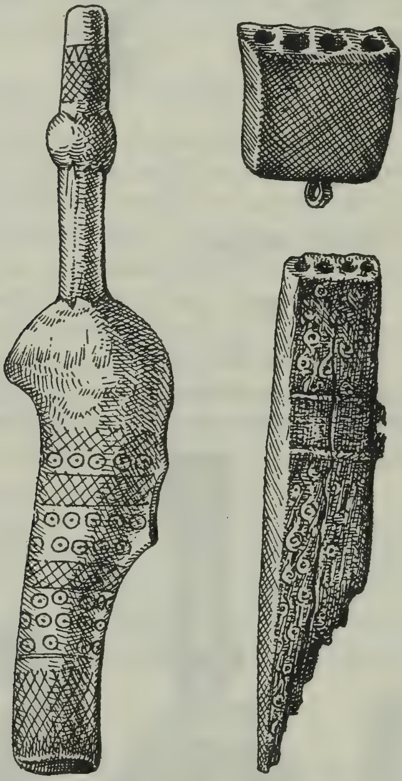

Figure 58.—Humahuaca artifacts. *Left:* Bone horn. *Right:* Wooden panpipes. (One-fifth actual size.) (Courtesy the Museo Argentino de Ciencias Naturales and the Museo Etnográfico de la Facultad de Filosofía y Letras, Buenos Aires.)

That these Indians had great respect for the dead is evident from their funeral practices and from the care with which they placed near them personal belongings, as well as food and drink, which it was believed they might need. Burial practices distinguish the Quebrada from the Puna. In the former, it was customary to bury the dead in stone graves or tombs in their own homes, although a few actual cemeteries have been discovered. On the Puna (pls. 136, *bottom*; 137), the usual burial place was a cave on a steep hillside. A burial vault was formed by sealing off the cave with a stone and mud wall, which generally had a small rectangular opening in the front. In both areas, the dead were always placed flexed, with the chin almost touching the knees and the arms crossed and fastened to the body. Tombs were single or collective, the latter with as many as 11 bodies.

CONCLUSION

These cultures were typically Andean; although the Puna and Quebrada differed from each other in certain aspects, both were influenced by neighboring areas, particularly by Perú and parts of Northwest Argentina.

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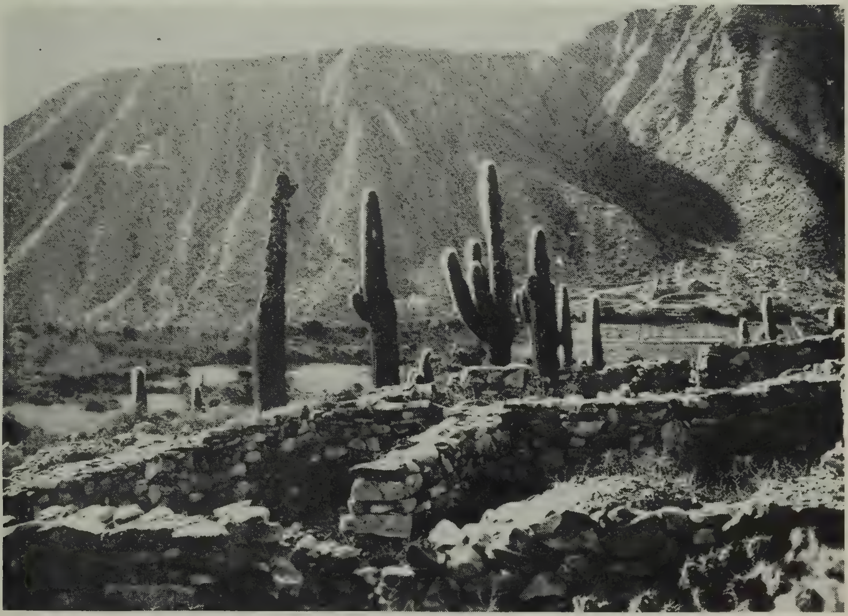


Plate 135.—**The Pucaras (forts) of Humahuaca and Tilcara.** *Top:* General view, Humahuaca or Peñas Blancas. (After Casanova, 1939, fig. 7.) *Bottom:* Tilcara. (After Debenedetti, 1930, pl. 25, *l.*)

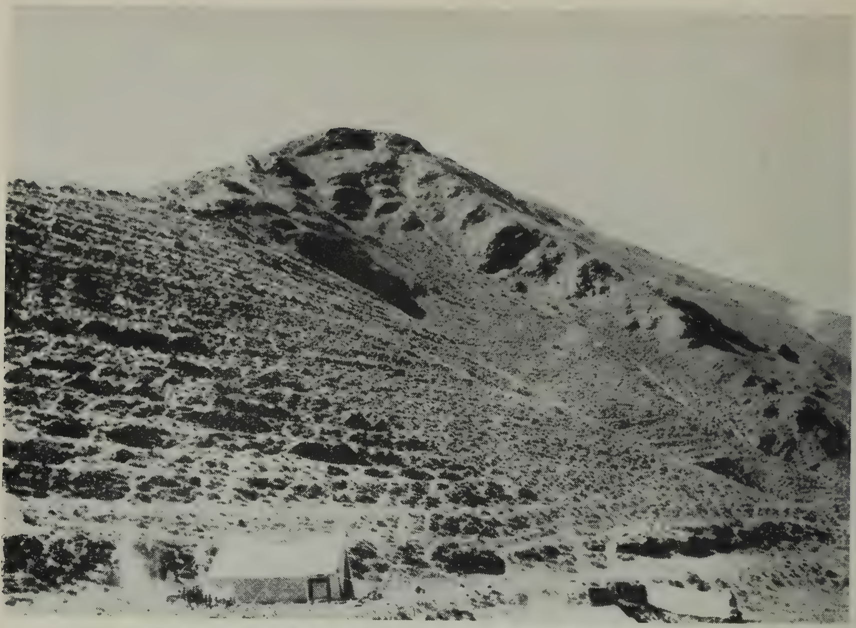
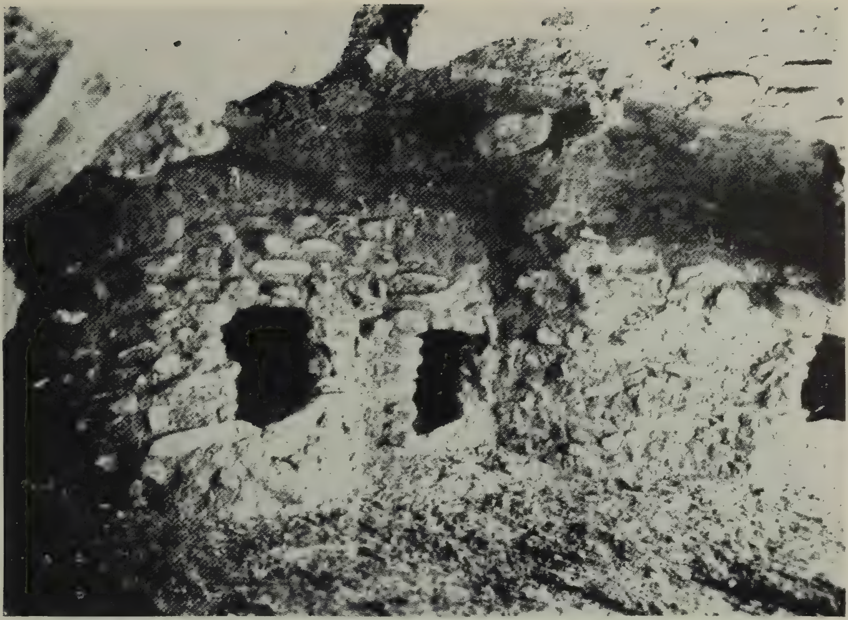


PLATE 136.—**Terraces and tombs of the Quebrada de Humahuaca and the Puna.** *Top:* Terraces. (After Debenedetti and Casanova, 1933–35, pl. 2, *b*.) *Bottom:* A closed sepulcher, Sorcuyo, Puna de Juyuy. (After Casanova, 1936 c, pl. 3, *2*.)



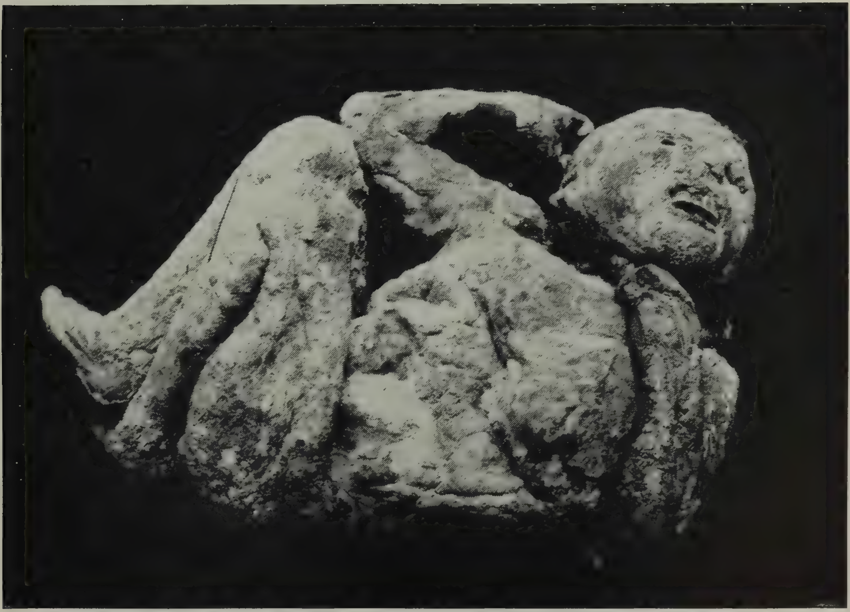
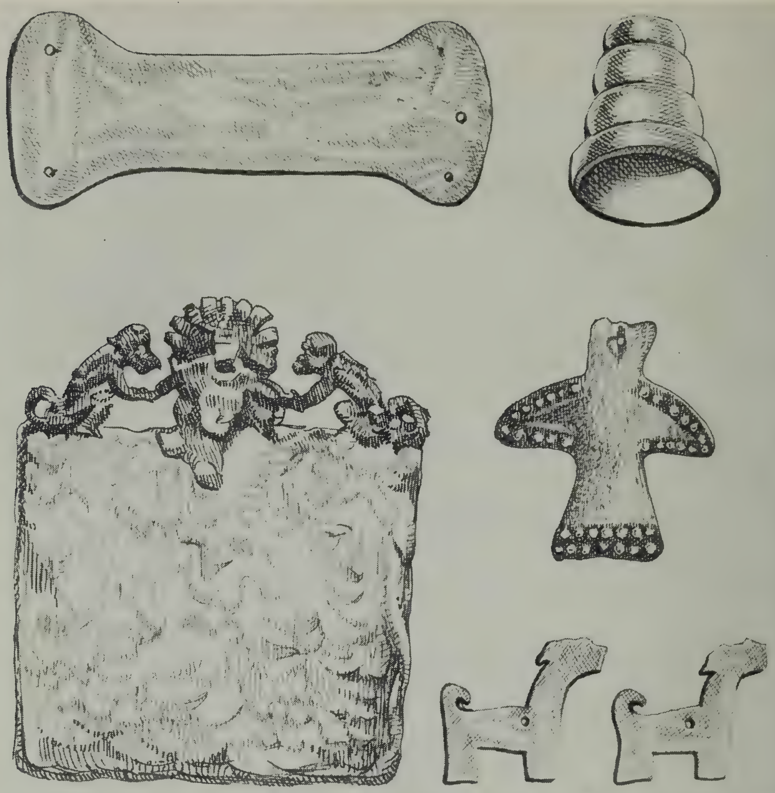


PLATE 137.—**Treatment of the dead, Puna de Jujuy.** *Top:* Sepulchers in caverns, Vallecita, Puna de Juyuy. (After Debenedetti, 1930 b, fig. 6.) *Bottom:* Mummified boy, found on the Puna. (After Boman, 1918, fig. 1.)



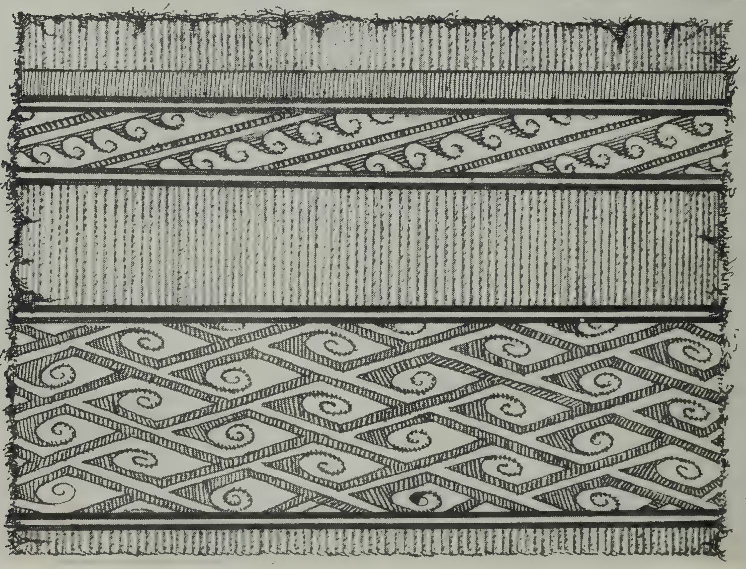


PLATE 138.—**Manufactures from Humahuaca and the Puna.** *Top (left):* Bronze plaque. *Other artifacts:* Gold ornaments. (All natural size.) (Courtesy Museo Argentino de Ciencias Naturales and the Museo Etnográfico de la Facultad de Filosofía y Letras.) *Bottom:* Piece of a polychrome textile from the Puna. (Natural size.) (Courtesy Museo Argentino de Ciencias Naturales.)

THE DIAGUITA OF CHILE

By Samuel K. Lothrop

HISTORY

When the Spaniards, under Diego de Almagro, first entered Chile, they had guides with them from the present Argentine Provinces of Catamarca and Jujuy, who spoke the same tongue as the inhabitants of what are now the Chilean Provinces of Atacama and Coquimbo (map 1, *No. 10;* map 5). No adequate historical accounts of these natives exist, and their tribal names are unrecorded. The linguistic link of the 16th century, however, indicates that these Chilean Indians should be numbered among the *Diaguita* tribes, most of whom lived across the Andes in Argentina. This conclusion is borne out by present botanical and geographical names, as well as by archeological proof.

The *Diaguita* of Chile evidently entered the country from the east with an already developed culture. The most ancient graves indicate the practice of agriculture, weaving, pottery making, and metallurgy. That they came from across the mountains seems certain, because animals not native to Chile—jaguars, rheas, and quirquinchos—are represented in pottery, and because the actual skeletons of llamas or alpacas have been found with early burials on the Chilean Coast.

How long ago the *Diaguita* entered Chile cannot be stated at present, but additional archeological data probably will give a fairly exact answer, for trade relationships existed with distant but better-known regions. As might be expected, the principal commercial ties were with Northwest Argentina, where shells from the Pacific were exchanged for local products. The identical forms of many implements and tools on both sides of the Cordillera also suggest frequent contacts. Trade to the north resulted in cultural interchange between the *Atacameño* and *Diaguita.* Furthermore, the *Diaguita* evidently came in touch with the culture of Tiahuanaco, for they copied classical Tiahuanaco designs on objects of local manufacture. Facts now available do not disclose whether the *Diaguita* had seen the Tiahuanaco stone sculpture of Bolivia or the textiles and pottery in this style found in the Nasca region on the Coast of Perú, but it is clear that both cultures were in part contemporaneous.

CULTURE

SURFACE STRUCTURES

The Chilean *Diaguita* left few traces of their existence above ground. A number of hill fortresses have been reported consisting of concentric, dry-stone walls which are 5 to 6½ feet (1.5 to 2.0 m.) thick at the base. House walls of dry stone, formerly roofed with reeds, are small and usually rectangular. Some, however, are circular or oval. Ancient walls of mud or adobe exist but they may be post-Conquest.

BURIALS

Several distinct forms of graves were used by the Chilean *Diaguita*. Latcham (1928 a) records a sub-Andean type consisting of a rectangular cist built of stone slabs, in which a single body was placed on its side. Small circular graves containing from two to eight bodies are reported. These probably were the bodies of chiefs, together with their wives and slaves. Near the Coast, Latcham has found cists built above ground in which the body was seated and the whole was covered by a mound of earth. He considers this form typical of Central Chile, and believes it was employed by the *Diaguita* for only a short time.

A cemetery excavated by the writer near La Sirena contained three types of graves. The most ancient either were secondary bundle burials or the body had been seated and then collapsed. Above were stone box-graves covered with large slabs, in which one to four bodies were extended face upward. At the same level and above were flexed bodies lying haphazardly.

POTTERY

Pottery (pls. 139, 140) of the Chilean *Diaguita* tends to be smaller in size, harder, and more delicately decorated than that of the Argentine *Diaguita*. Cooking ware is either dark brown or red. Shoe-shaped jars and bird effigies, decorated by modeling or filleting, are common. The tableware is adorned with firm thin lines painted in black, or black and red, on a light slip. Occasionally, designs with a white outline occur. The typical shape is a bowl with flat or slightly curved walls and a rounded base. Painted jars, sometimes representing animals, are found but are not common. Decoration, for the most part, consists of geometric forms such as hatched triangles, zigzags, and checkerboard patterns. Terraced frets set in the corners of rectangular panels are very typical. Animal forms and human faces also occur. It is obvious that there are regional as well as temporal variations in style but their significance has not been studied.

The *Inca* extended their conquests to Chile only about half a century before the arrival of the Spaniards. *Inca* pottery, however, was imported to Chile and such typical *Inca* forms as the aryballus were copied by the *Diaguita.* Pottery shapes characteristic of the Peruvian Coastal cultures also occur in the *Diaguita* area. Among these are the double spout joined by a bridge (Late Chimu) and the head and spout joined by a bridge (Nasca or Late Chimu). These pieces obviously were made in Chile, perhaps by colonies (mitimaes) forced by the *Inca* to settle among the *Diaguita.*

METALLURGY

The casting of copper or bronze was well developed among the *Diaguita* both of Argentina and Chile. Certain objects, such as the tupu (a pin with a disk-shape head), the tumi (a crescent-shaped chopping knife with a rounded handle), and the star-shaped club head, are forms derived from Perú. Chisels, tweezers, rings, and other objects had a similar source. A number of metal articles, however, are typical only of the *Diaguita.* Among these we may list metal knuckle-dusters, wrist guards for archers, rectangular knife blades, axes with flaring "wings," disks with a flat handle, and wire earrings with a knob to hold them in place. Argentine metal types which are not typical of Chile include massive disks with relief decoration and socketed axes.

Gold and silver ornaments and small bells sometimes occur in *Diaguita* graves. These objects invariably are hammered rather than cast. Gilding, plating, and alloys of the tumbaga class were unknown. This failure to develop techniques for working precious metals extends to southern Perú and Bolivia, where copper and bronze were the only metals cast before the *Inca* Period.

WOODWORKING

The *Diaguita* were excellent workers in wood. Large objects include paddles and agricultural "knives," used to break up clods. More typical, however, are delicately carved articles of small size, among which are trays, usually with a handle in human or animal form. Associated with the trays are carved tubes. It is thought that the trays were used to hold rape, a type of snuff, which was inhaled through the tubes. Wooden paint boxes were manufactured in many different varieties. Typical are rectangular boxes, divided into two or four sections by small partitions, and tubular boxes with a stopper of wood or a cover of hide. Wooden bells for llamas and harness toggles were made both by the *Diaguita* and *Atacameño.*

BONE OBJECTS

Various articles were carved in bone, including small spoons adorned with animal figures, sometimes inlaid with turquoise.

STONE OBJECTS

The *Diaguita* of Chile flaked small stone arrow points that had barbs and tapered stems. In addition, they manufactured mortars, pestles, and grinding slabs (metates).

The crudely flaked stone implements which typologically are comparable to artifacts of Paleolithic Europe have been discussed elsewhere (this volume, p. 592).

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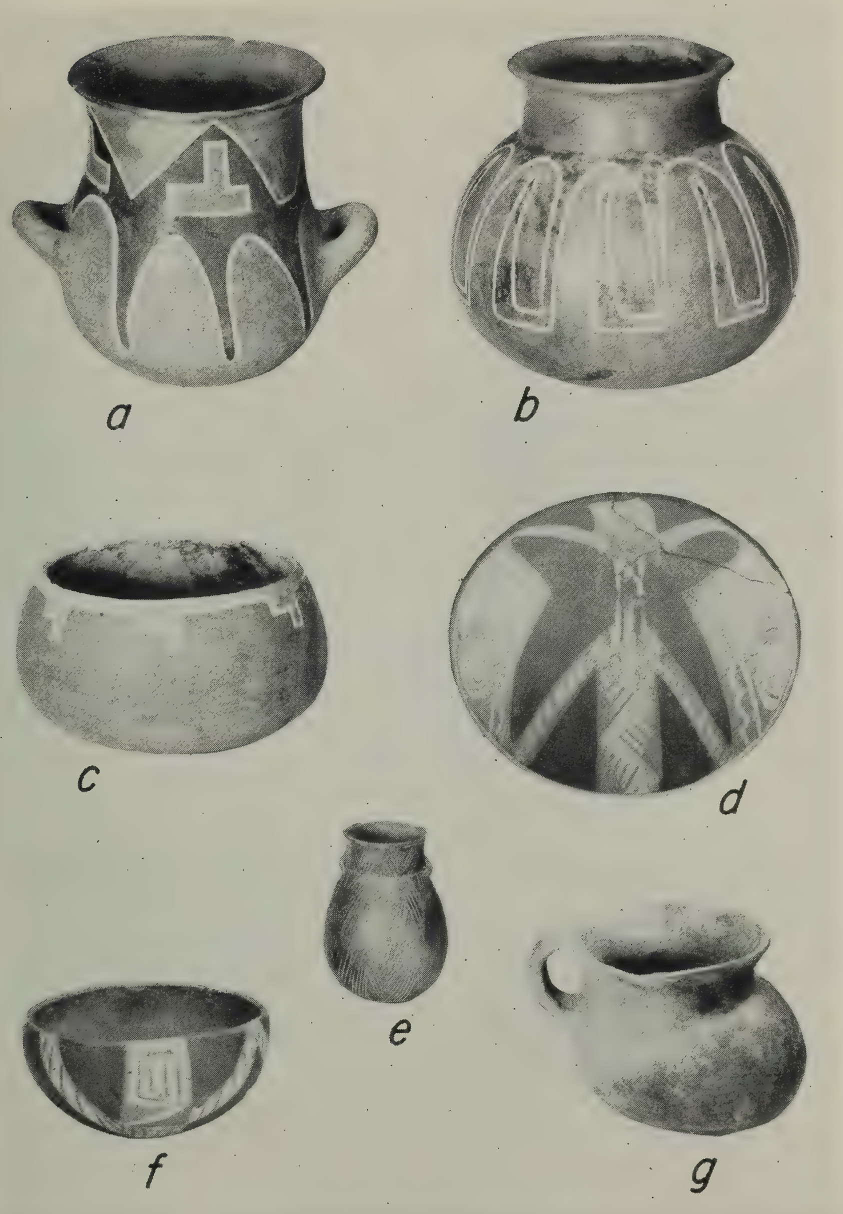


PLATE 139.—**Diaguita pottery from the Elqui Valley, Chile.** *a–c,* White-and-gray-black or gray-brown on a red slip. (Height of *a,* 8 inches (20.3 cm.); height of *b,* 8 inches (20.3 cm.); diameter of *c,* 7 inches (17.7 cm.).) *d,* Gray-brown and white-on-red on interior, and red exterior. (Diameter 8 inches (20.3 cm.).) *f,* Gray-brown and white-on-red exterior and red interior. (Diameter 5¾ inches (14.6 cm.).) *e,* Non-*Diaguita* incised gray-black ware, from El Molle site. (Height 3⅞ inches (9.8 cm.).) *g,* Plain ware cooking pot. (Length 6½ inches (16.5 cm.).) (Courtesy American Museum of Natural History.)

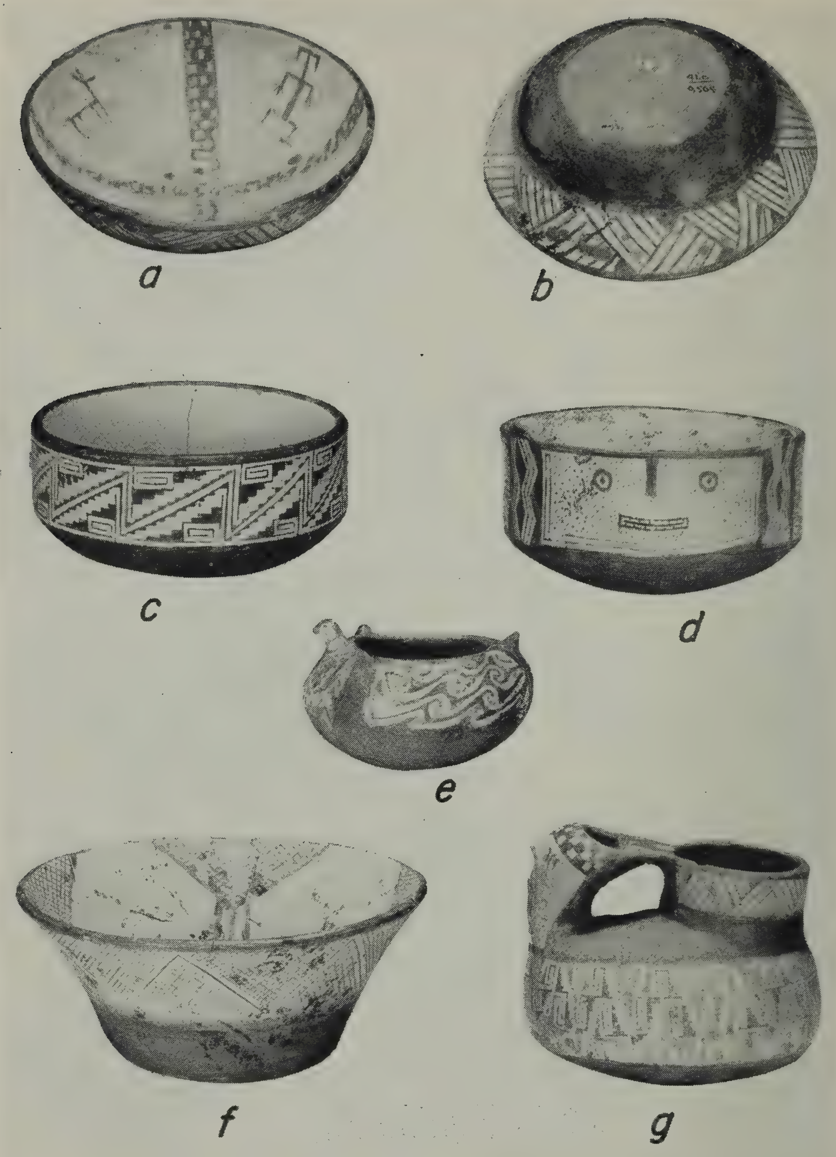


PLATE 140.—**Diaguita pottery from the El Elqui Valley, Chile.** *a, b,* Interior and exterior of gray-brown on white bowl. (Diameter 7½ inches (19 cm.).) *c, d,* Gray-brown and red-on-white, the most common *Diaguita* form. (Diameter approx. 7 inches (17.8 cm.).) *e,* Red and brown-on-white. (Diameter 5 inches (12.7 cm.).) *f,* Gray-brown-on-white interior, and gray-brown and red-on-white exterior with red border below. (Diameter 8¼ inches (25.3 cm.).) *g,* Red and gray-brown-on-white. Jar has two openings. (Diameter 7 inches (17.8 cm.).) (Courtesy American Museum of Natural History.)

THE DIAGUITA OF ARGENTINA

By Fernando Márquez Miranda

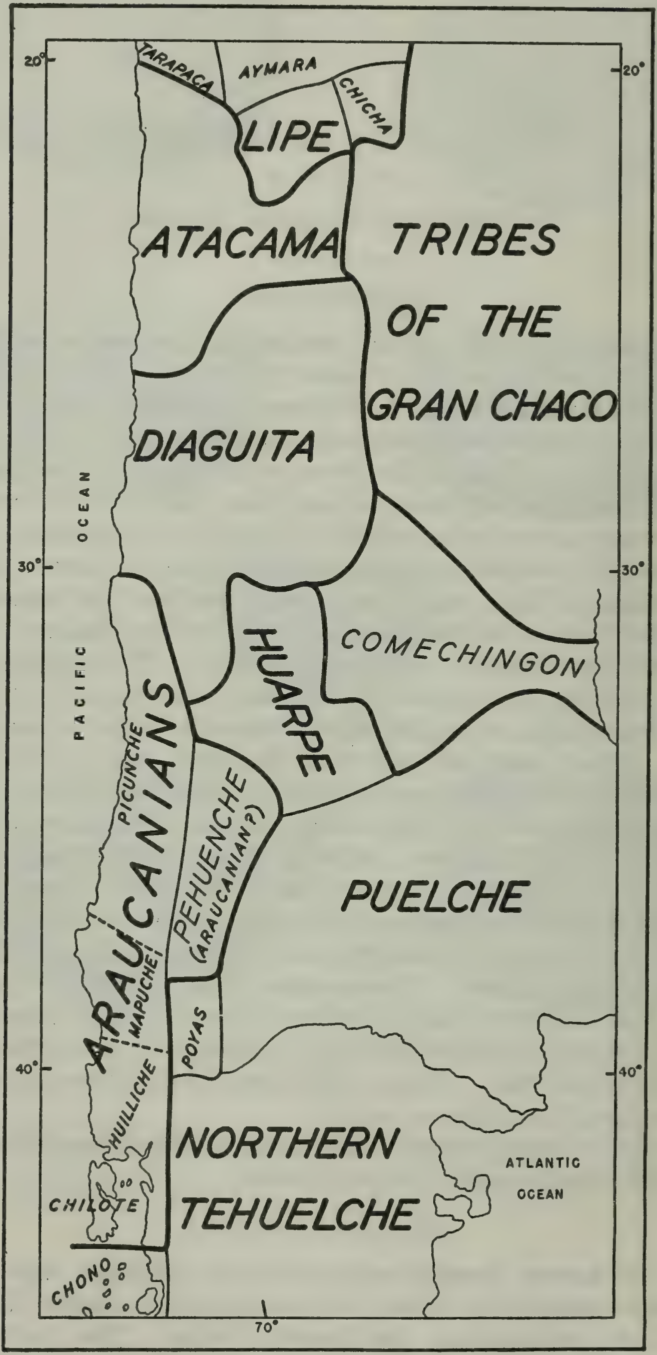
INTRODUCTION

"The Diaguita world," as the Spaniards of the first expeditions, or "entradas" into the territory, called the Province of the *Diaguita*, occupies the largest portion of Northwest Argentina (map 1, *No. 11*). It is not so extensive as Ambrosetti thought, when he ascribed to it the territory from Chile to the slopes of the Sierra of Aconquija and from the Peruvian Highland to San Juan, but is, nonetheless, the largest area in Argentina occupied by a people with an Andean culture. In the north, it reached the Nevado de Acay and the Lerma Valley in the Province of Salta, and in the south it included the mountainous part of the Province of San Juan, although authors disagree in detail as to both the northern and southern limits. The problem of the Chilean *Diaguita* in the west (see Lothrop, this volume, p. 633), and of their relationship to the *Diaguita* of the eastern Andes, is still to be solved. We are concerned here with the latter, that is, the *Diaguita* who inhabited Argentina northwest to the present Province of Tucumán and some sections of the western portion of Santiago del Estero (map 5). Within this area, including all of the Provinces of Catamarca and La Rioja, lived many tribes. These tribes were governed by chiefs who made occasional alliances, but were divided by the absence of a centralized authority and by certain cultural differences to be mentioned below. The chronicler Lozano (1873–75), a Jesuit Father, was the first to use the archives in preparing his history of the Conquest of the territories which later formed part of the Viceroyalty of the Río de La Plata. He gives full lists of tribes whose names have often survived in modern toponymy.

There are three main archeological subareas of the *Diaguita* territory: Calchaquí, Los Barreales, and San Juan.

CALCHAQUÍ CULTURE

The best known *Diaguita* subgroup is the *Calchaquí*, who lived in the valleys named after them—the modern Santa María Valley and its southern prolongation, the Quimivil Valley. The *Calchaquí* are best known because their hostility and ferocity toward the first Spaniards who invaded their territory caused them to receive great


20°
20°
TARAPACA
AYMARA
CHICHA
LIPE
ATACAMA
TRIBES OF THE GRAN CHACO
DIAGUITA
PACIFIC OCEAN
30°
30°
HUARPE
COMECHINGON
ARAUCANIANS
PICUNCHE
PEHUENCHE (ARAUCANIAN?)
PUELCHE
MAPUCHE
POYAS
40°
40°
HUILLICHE
NORTHERN TEHUELCHE
ATLANTIC OCEAN
CHILOTE
CHONO
70°

Map 5.—Tribes of Chile and Northwest Argentina. (Compiled by the editors.)

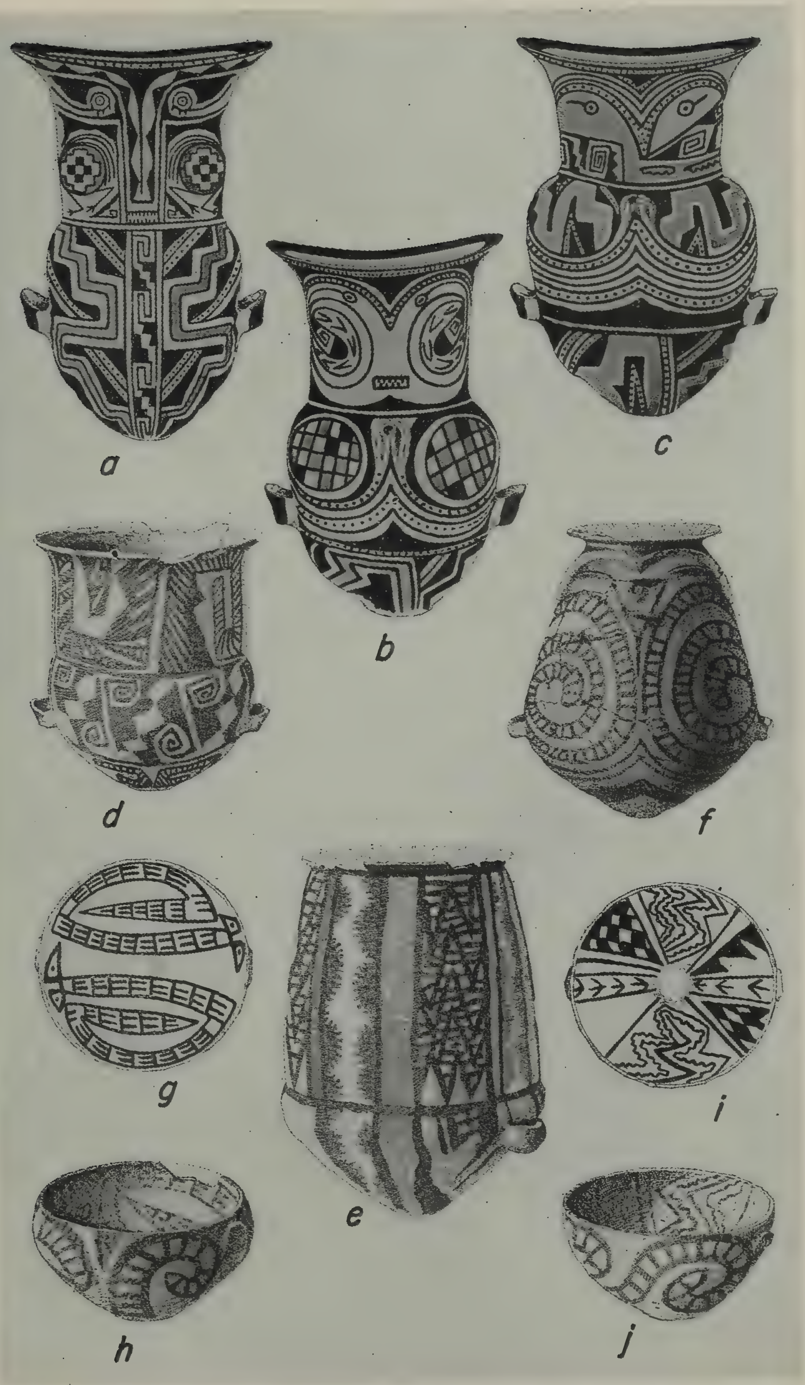


PLATE 141.—**Diaguita pottery.** *a–c*, Santa María urn types; *d*, Belén type urn, decorated with serpentiform and geometric elements, cemetery of Punta de Balasto, Catamarca; *e*, Belén type urn with geometric decoration, Masao, Maravilla cemetery, Catamarca; *f*, Belén type urn with anthropormorphic elements in relief and with painted serpentiform decoration, Arroyo Chañaryaco Catamarca; *g, h*, interior and exterior of a puco (bowl) decorated, Masao, Catamarca; *i, j*, interior and exterior of another puco, Chañaryaco, Catamarca. (After Márquez Miranda, 1939, figs. 7, 8, 20.)

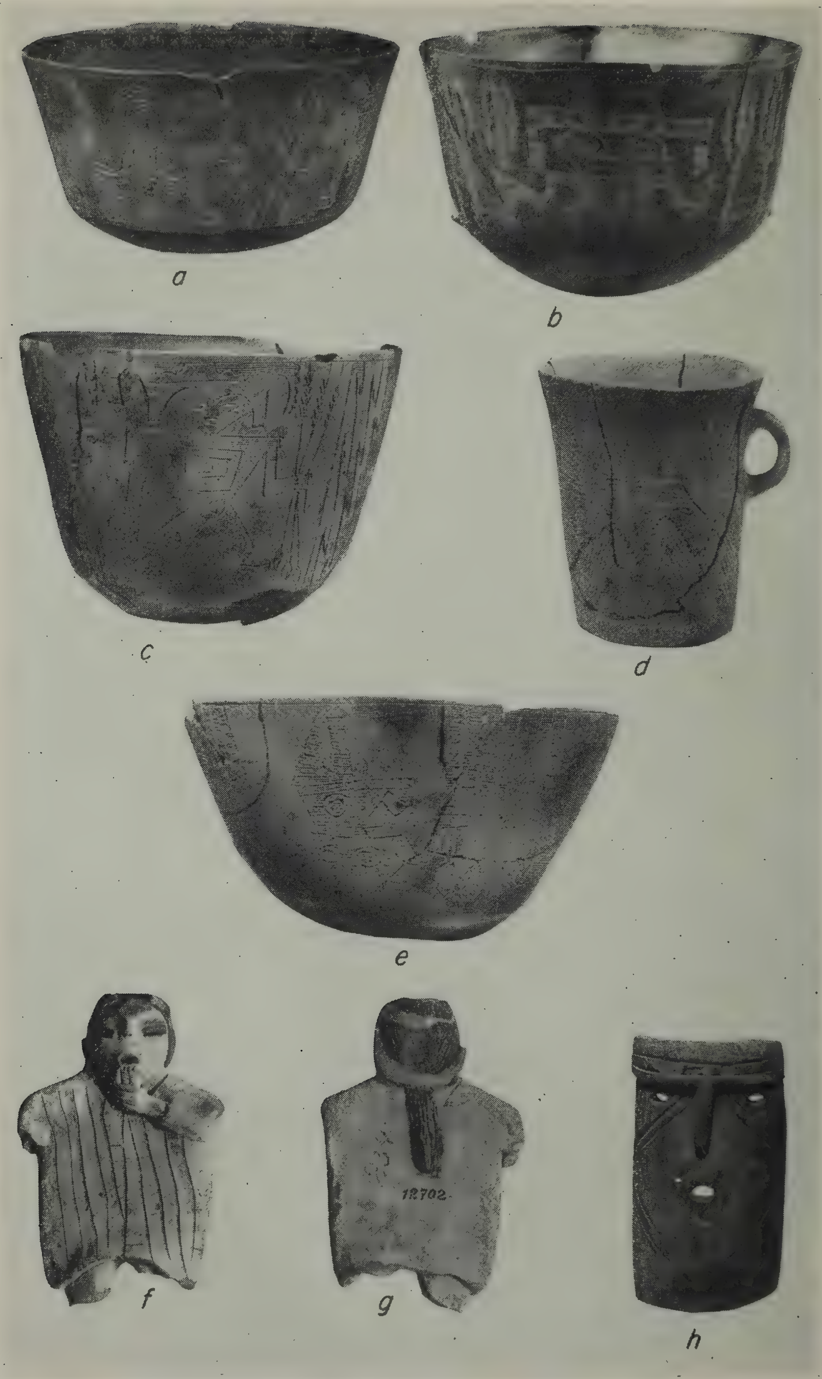


PLATE 142.—**Barreales ceramics and wooden mask from Atajol.** *a*, Warrior with spear thrower, black incised ware; *b*, warrior with javelin and possibly a boomerang, same ware; *c*, warrior with trophy head, same ware; *d*, black Barreales incised pottery; *e*, masked warrior. (Diameters of *a–c*, *e*, about 4¾ inches (12 cm.).) *f*, *g*, Front and back view of pottery figurine from La Aguada, Department of Belén, Las Barreales region. *h*, Wooden mask of algarroba, a unique example from Atajol, (Courtesy Museo de La Plata.)

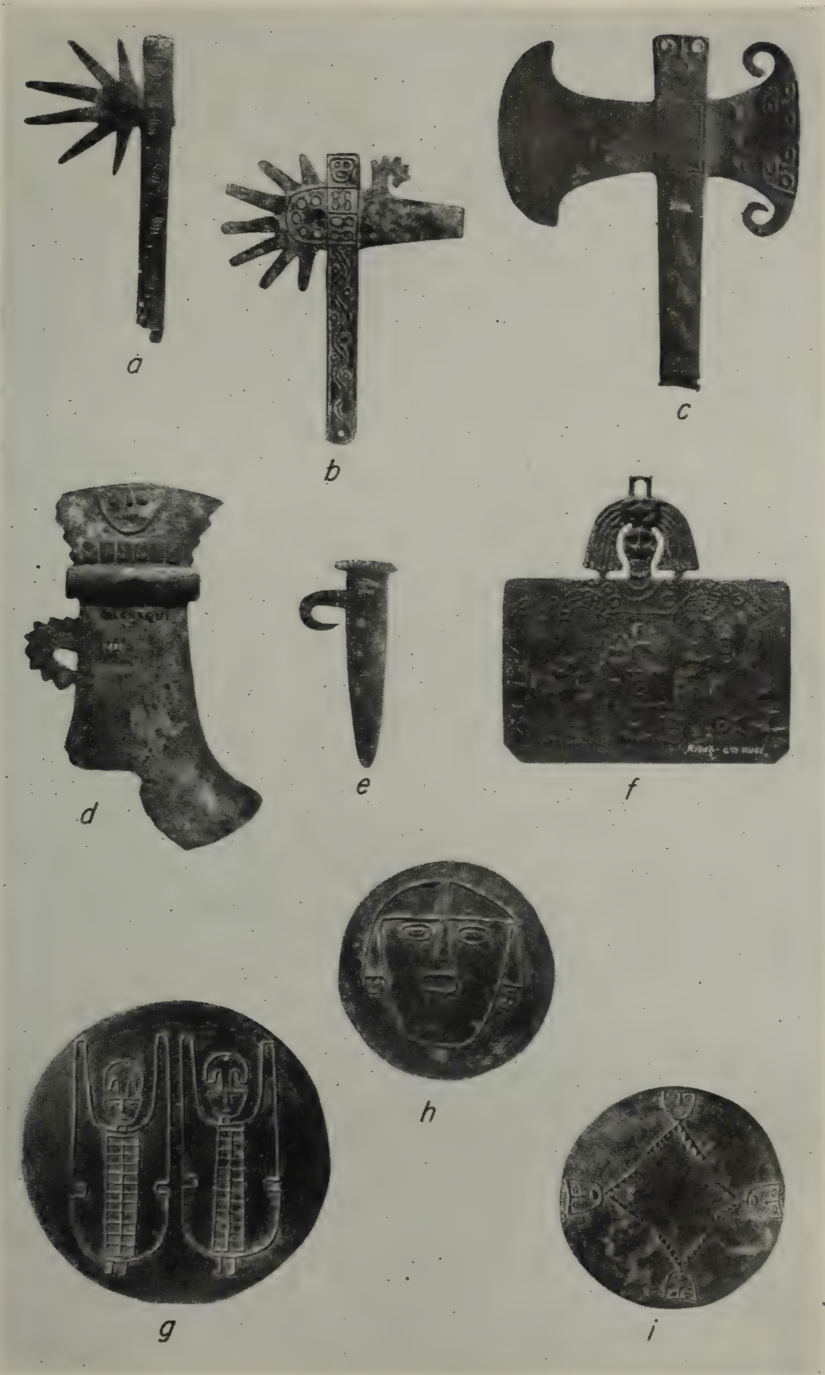


PLATE 143.—**Diaguita metal artifacts.** *a, b,* "Tokis," or ceremonial axes (hachas de mandar). (Length 4¾ inches (12 cm.).) (Courtesy Museo de La Plata.) *c,* "Toki" (length 4⅜ inches (11 cm.).) *d, e,* "Tokis" (length 2 and 4 inches (5 and 10 cm.)). (Courtesy Márquez Miranda.) *f,* Chest plaque of copper with anthropomorphic and geomorphic decorations, from La Rioja. (Courtesy Museo de La Plata.) *g,* Large copper shield (diameter 3¼ inches (8 cm.)). (Courtesy Márquez Miranda.) *h, i,* Other shields. (Courtesy Museo de La Plata.)

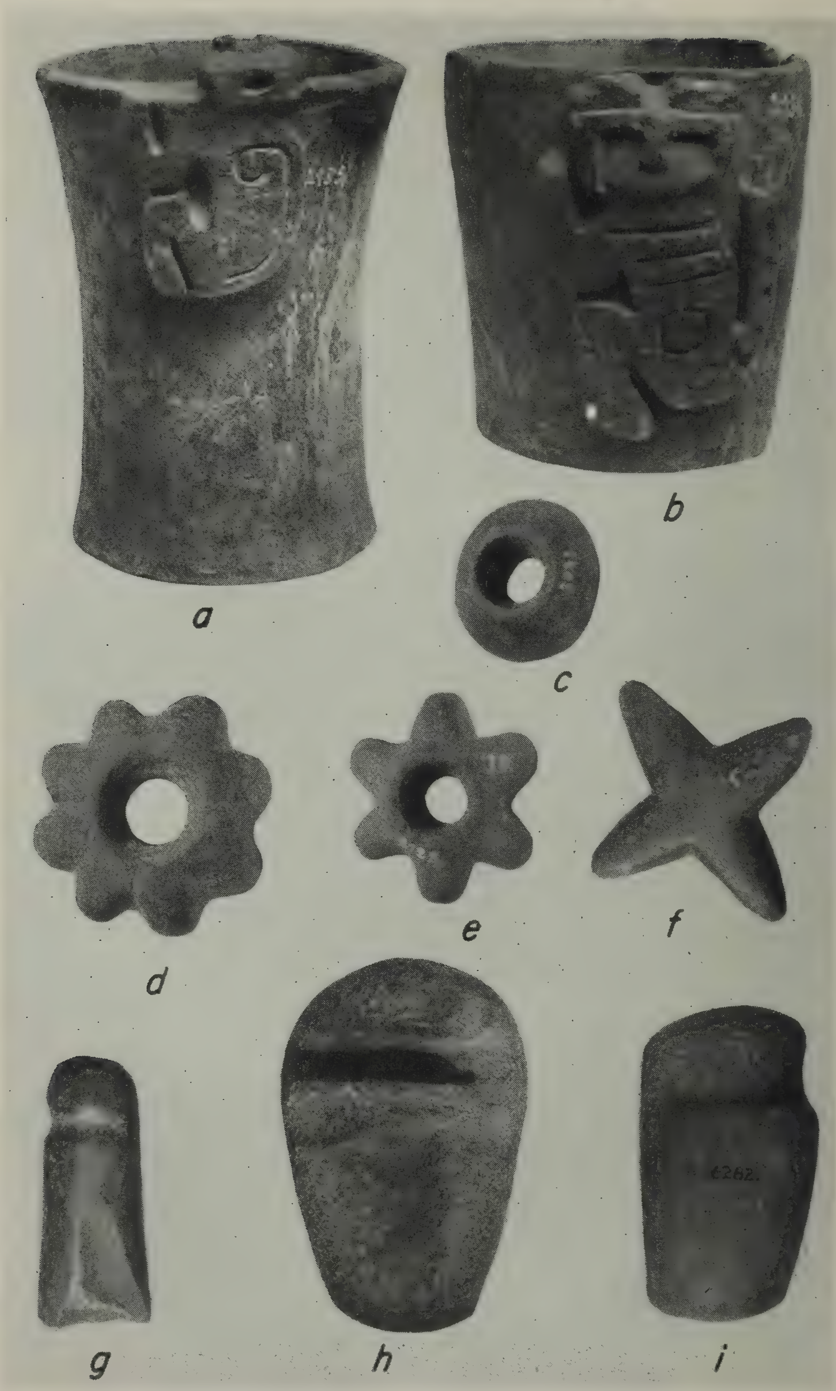
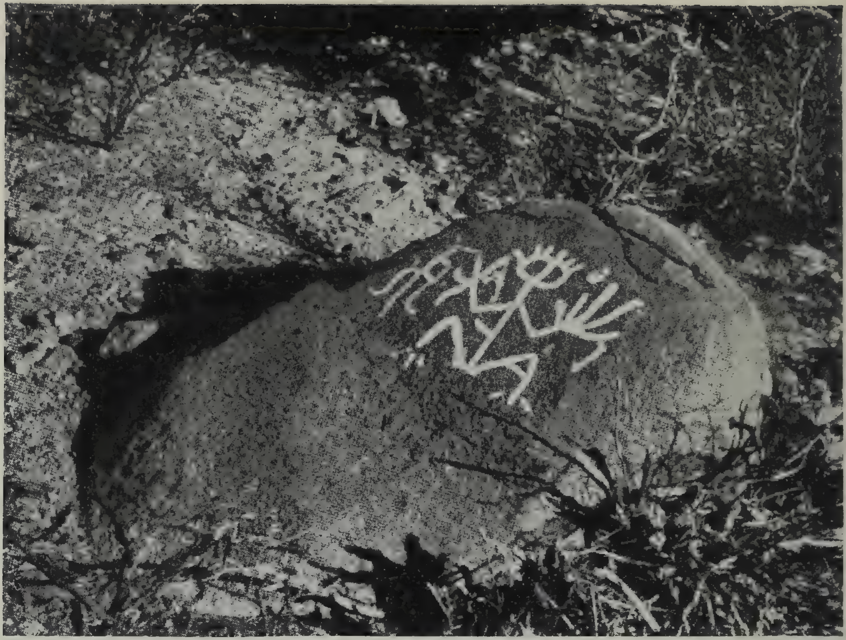


PLATE 144.—**Diaguita stonework.** *a*, *b*, Two vertical mortars with zoomorphic decoration from Las Barreales. (Courtesy Museo de La Plata.) *c-f*, Four types of club heads. (Diameter of *c* is 1¼ inches (3 cm.), others in proportion.) (Courtesy Márquez Miranda.) *g-i*, Stone axes with incomplete groove. (Courtesy Museo de La Plata.)

Plate 145.—**The Pucara of Punta de Balasto, Fort Mendocino, Department of Santa María, Catamarca.** *Top:* Defense walls on terraces; *Bottom:* Defense tower. (Courtesy Márquez Miranda.)



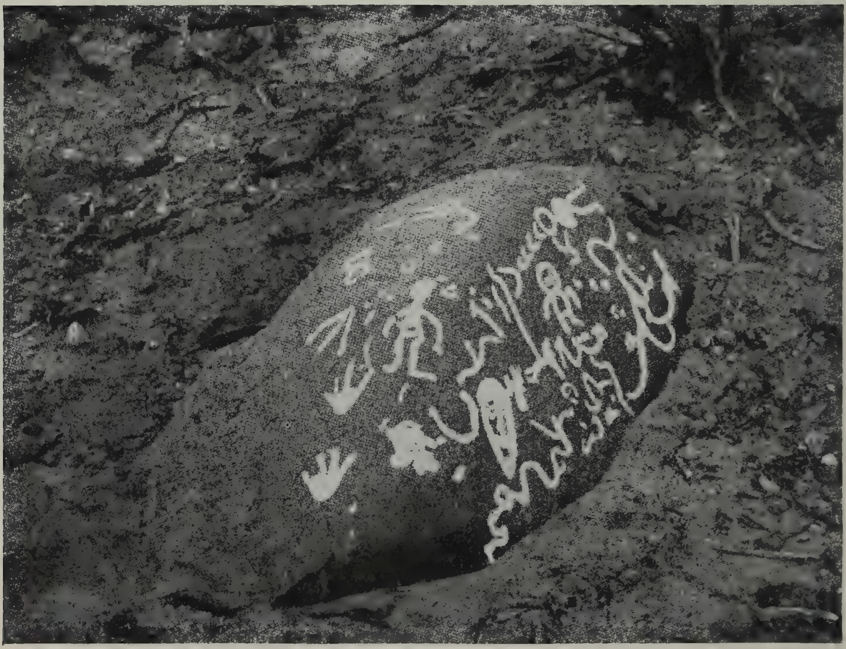


Plate 146.—**Petroglyphs from the Diaguita region.** Reinforced with chalk. *Top:* Anthropomorphic figure from the Mesada Agüero. *Bottom:* Anthropomorphs, serpents, animal tracks on a stone on west side of the Andalgalá-Ampajanco road. Both sites are in the Department of Santa María, Catamarca. (After Márquez Miranda, 1939, fig. 22.)

attention in the manuscripts of the Conquest. Thanks to the large amount of information collected in the general chronicles of Tucumán, in the countless "Informaciones de Meritos y Servicios," and in the letters of the Bishops and Governors to the King of Spain, it is possible to reconstruct much of their social organization, their customs, their government, and especially their warfare. These sources, however, record nothing about the arts and industries. Fortunately, archeological remains are sufficiently abundant to be very enlightening.

ARCHITECTURE

The outstanding feature of the *Calchaquí* subarea is the great number of architectural remains, which can be functionally divided into structures built for peacetime pursuits (pueblos viejos, "old villages") and those made for war (pucaras).

Dwellings.—The pueblos viejos were the dwellings of sedentary farmers built without defense works along streams. They were dedicated to a peaceful, industrious life. The dwellings are grouped in an irregular manner with a tendency to leave small streets or paths between them. Characteristically, each individual house is constructed as a complete unit, and even when two houses adjoin each other, they do not have a common wall. The house walls are of pirca, or dry-masonry construction, made of irregular stones with an inside height equal to that of a man. The roofs were made of a frame of branches resting on the walls and supporting smaller transverse branches, which were covered with leaves or with torta (mud mixed with small stones, fragments of plants, straw, and so on).

The dimensions and shape of the dwellings are not uniform. The rectangular form—typical of Andean houses—seems to predominate, but others which are elliptical and even some few which are very irregular occur in the same site with these rectangular houses. The irregularity of these structures is explained by the uneven ground on which they stand.

Fortifications.—The pucaras, or fortifications, are as a rule located on strategic places (pl. 145). The entrances and exits of the large valleys and of the quebradas opening into them were protected by fortifications. Some of these constitute complicated systems of defense. The first description of a pucara is in the "Historia," by Pedro Lozano (1873–75, 5: 207–08). Recently Lange (1892) reproduced plans of some pucaras, and several of his plans were later improved by Bruch (1911). The fortifications shown in these plans consist first of a series of small defensive walls ascending the slopes. In places they have loopholes, and there are a number of small bastions. The walls never exceed the height of a man and sometimes are even lower, being just high enough to protect an archer shooting from behind them. At intervals, openings in the walls form passages for attacks or strategic retreats. To stop an invasion and expose the attackers to the arrows of the defenders, these openings never coincide in two contiguous walls. On top of the hill are grouped the buildings for the permanent garrisons of the fortification. A most serious problem was that of water storage. In a village it could be obtained from the nearby river; but the pucaras were high above the river level, and a siege could force their surrender owing to the lack of water. In the pucara of Aconquija, in the Department of Andalgala, Province of Catamarca, a water hole (ojo de agua), today dry, averted this danger. In other cases, true water cisterns were built to store the precious liquid.

The walls were only built on the slopes which were less steep; cliffs, which could not be ascended, were left without special fortification. In the pucara of Punta de Balasto there were seven parallel walls. The lowest, located on the southeastern side of the hill on which the pucara is situated, is reinforced by two large cylindrical towers, about 650 feet (200 m.) apart, with a quebrada or gulley in between. The wall is as much as 5 feet (1½ m.) thick and 10 feet (3 m.) high on the outside.

Fortified towns.—Another type of urban construction is essentially civilian, but has defensive works. This is what Ambrosetti (1897, 1907–08) called "cities." Ambrosetti studied two sites of this type: Quilmes (in Catamarca), which he describes in a small pamphlet (1897), and La Paya, on which he wrote one of his greatest and most complete works (1907–08). Both sites have extensive ruins of dwellings, granaries, and external protective walls. Their large size explains the somewhat too ambitious name given them by Ambrosetti.

Miscellaneous structures.—Other architectural works include granaries or silos, and andenes or terraces for cultivation. The former are ellipitical structures, smaller in diameter than houses. Houses are 13 to 16 feet (4 to 5 m.), silos as a rule not over 6 feet (2 m.) in diameter. Silos and dwellings are built of dry masonry or pirca. The agricultural terraces, like those of the *Inca*, were built to increase the area of tillable soil and to convert the sloping land into horizontal surfaces which would hold rain water. Because in the whole *Diaguita* area, plants were sowed "a temporal," that is, without artificial irrigation, these andenes were imperative for productive harvest.

No trace of houses remain in the subarea of Barreales, no doubt because they were built of vegetal materials. For San Juan, Debenedetti (1917) has mentioned great rectangular constructions of adobe. There are also rectangular stone edifices which may be of *Inca* origin.

DRESS AND ORNAMENTS

All the *Calchaquí* and *Diaguita* belong to what the chroniclers called the "dressed people." Repeated statements in historical sources and abundant archeological evidence confirm this. Father del Techo (1673, p. 147) mentions a shirt or camiseta which, according to Fathers Romero and Monroy (Torres, 1603, fol. 16), the natives tied around the waist with a belt when they went to war or to hunt. Del Techo adds that women's clothes varied according to their social status: "Virgins wear painted cloths and those who are no more, plain ones." This shirt or camiseta, which some modern archeologists called the "tunic," was the principal garment. It was made of woven wool of various species of the genus *Lama*, the finest being of vicuña and the more ordinary of llama. Semirealistic rock paintings of human beings at Carahuasi and elsewhere in the *Diaguita* region confirm the statements of the Jesuit fathers. The Carahuasi paintings show these garments in white and yellow, some ornamented with various colors, predominantly red and black. Naturally, we do not know how faithfully these pictographs depict reality. They give, however, some very valuable data. For instance, they show the shirt as ankle-length, a fact which is confirmed by the aforementioned Jesuits and by repeated human representations which decorate the funeral urns of Santa María. (See Ceramics, below.)

Unfortunately, few textiles have been found. Ambrosetti (1896–99), Quiroga (1903), and Boman (1908) have found and described fragments of ponchos in various sites of the *Diaguita* area. Outside of the *Calchaquí* subarea, especially in the region of Angualasto (San Juan), textiles have been found in great quantity. Vignati (1934) described the clothing of a mummy of Angualasto in a detailed monograph.

Petroglyphs, ceramics, and historical sources agree in stressing the exceptional importance of the *Calchaquí* headdress and hairdressing. The *Calchaquí* wore their hair long. To cut a chief's or warrior's hair was a public sign that his status had been lowered. One of the worst punishments which the Spaniards could inflict on the defeated Indians was to "shave their hair." Hairdress had different shapes. Quiroga (1903) described it as "an intricate work," which contrasted with the crudeness of the comb used. The latter was made of cactus thorns, transversely attached to a central piece. The Indians used feather ornaments and woven headbands to fix their hair. Hair was parted in the middle and rolled on the sides like the hair of the *Hopi* girls.

Many skulls are artificially deformed by tabular erecta (fronto-vertico-occipital) compression.

Large disks of gold and silver wrought with diverse decorations were fastened to the forehead or to the sides of the head or were sewn to clothes. Del Techo (1673, p. 147) calls them "orbes." The present author has studied the various types of the *Diaguita* hairdress.

Warriors decorated themselves with feathers, carried shields on the forearm, and wore silver or copper bracelets, tupus (pins with wide and decorated heads), and plain or engraved chest plates. Some of the engraved plates were very beautiful and had complex decoration (Lafone-Quevedo, 1890). In marked contrast to the pre-*Inca* and *Inca* people, these Indians used small, light ear pendants. Necklaces of bone or colored stone beads (guaycas) added to their decoration. In rare cases, these guaycas were of metal, but as a rule they were of malachite, porphyry, calcareous stones, etc.

We do not know whether these Indians tattooed, but archeological evidence shows that they painted their faces. They evidently depilated themselves, for copper tweezers have been found in tombs.

They used sandals (ojota) of the *Quechua* type. They carried llijta and coca and small objects in chuspas, bags made of wool from species of *Lama*.

The Santa María urns and the anthropomorphic images of La Rioja give information on clothing and headdresses.

MANUFACTURES

Textiles.—Textiles were made of wool from animals of the genus *Lama*. Looms consisted mainly of two wooden bars which supported the warp. Designs were woven in with threads dyed with vegetal colors. The most commonly used dyes were: algarrobo for gray and black colors, asuque for lead-blue, atamisqui and colar for gray, cardón for various shades of violet, coshque yuyi for pale pink, churqui for gray and black, espinillo and mistol for coffee color, and molle for yellow. The permanence of the colors was extraordinary in view of the primitive technique used to fix them.

Basketry.—Because of the humid subsoil, we only have indirect evidence of the basketry techniques. Some pots were modeled inside a basket and still bear its markings. Ambrosetti's (1909) finds in La Paya reveal two techniques: coiled and twilled.

Ceramics.—The main specimens of *Calchaquí* ceramics are funeral urns and bowls (pucos). The first are jars used as sepulchers. Outside their dwellings, the *Calchaquí* had true cemeteries of infant urn burials. The first archeologists to work in this area explained burials in urns, a custom which is not reported in the early chronicles, as human sacrifices made to bring rain, and for that reason Quiroga (1898) called the anthropomorphic figure which appears on the upper part of the Santa María urns, the "Calchaquí Parca" (Calchaquí Death).

The most common and widely spread type of urn is called Santa María, after the place where it was first found (figs. 59, 60; pl. 141, *a–c*). This type has a cylindrical neck, which widens more or less toward the mouth, and an ovoid body. Subtypes are distinguished by the relative proportions of the neck and body. The body may be smooth or encircled by one or more incised bands. These urns have also

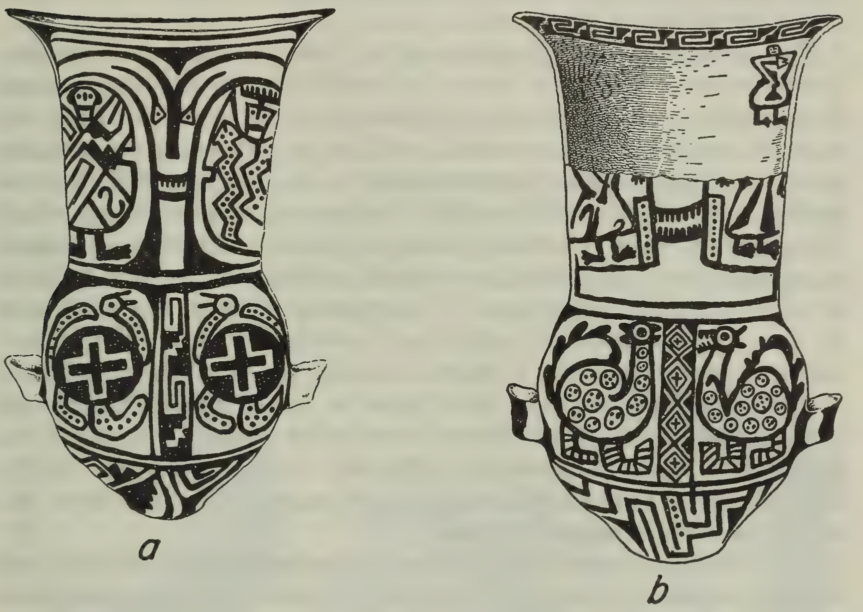


Figure 59.—*Diaguita* urns of Santa María type. From cemetery of Punta de Balasto. (After Márquez Miranda, 1939, figs. 6, 12.)

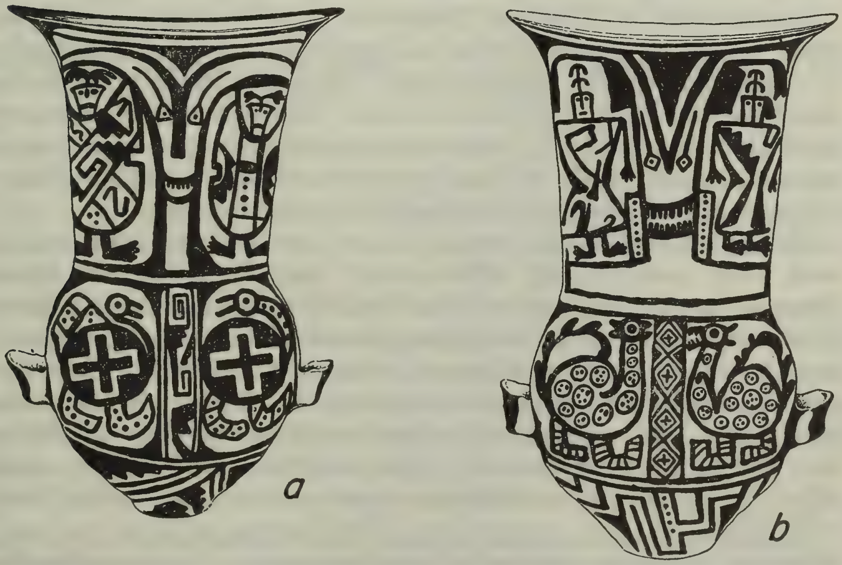


Figure 60.—*Diaguita* urns of Santa María type. From cemetery of Punta de Balasto. (After Márquez Miranda, 1939, figs. 13, 11.)

two simple, horizontal lugs placed about the middle or somewhat below the middle of the body.[1]

The decoration, though composed of few elements, has extraordinary richness resulting from the possibilities in the combination of the motifs. One element is constant in all; others differ from one vase to another. The constant motif is an extremely conventionalized anthropomorphic representation which is characterized by a double superciliary arch in relief, the internal extremities of which unite and extend downward to form the nose. The eyes are round or oblique, often with streaks attached, which some authors think to be tears or facial decorations. The mouth, which is not shown on all urns, is rectangular or square and reveals the teeth. The superciliary arches are the only elements in relief, the others being painted. A few urns, however, bear thin arms in relief, supporting a small bowl at chest level. This feature contributes to the attitude of "expectancy," which Ambrosetti (1896–99), Lafone-Quevedo (1892), and Quiroga (1898) attributed to these images. These authors believed the images begged for rain.

The variable elements are decorative representations of men and animals painted on the neck and body. Those depicting men show *Chalchaquí* clothing and hairdress. The animals include conventionalized toads, rheas (suris), and snakes, with crosses and geometrical figures on their bodies. Frets, lozenges, and checkerboard are the other decorative elements of the so-called "Santa María style."

Another style is called the "Draconian style" by Boman and Greslebin (1923). It consists of what is alleged to be a dragon, but actually is a conventionalized spotted feline. It has a body of fantastic shape and big claws and powerful teeth. Sometimes, it is extremely conventionalized and only a few elements are used: circles and ovals represent spots, bands or lozenges are the body, a sawlike design indicates the toothed jaws, and hooks represent the claws.

The urns of Belén (pl. 141, *d–f*) have two subtypes: one, with a neck, body, and a clearly differentiated base; the other, with these elements fused. The lugs are simple and horizontal, as on the Santa María urns. The gamut of the ornamental combinations is, however, more restricted, totally lacking such elements as the rhea. There is a greater development of geometric decoration. Whereas in the Santa María zone, the predominant colors are black-on-yellow, in Belén they are usually black-on-red. The urns of the San José type—also called the Andalguala or Veleroson type—are tripartite with a very short, open neck, a wide cylindrical or conical truncated body, and a subcylindrical or conico-truncated base. The lugs resemble those on the other types, but the material is cruder. There are also other, rarer types of urns.

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[1] Ambrosetti (1897, p. 58) established the Amaicha and Pampa Grande subtypes after the sites where he found them, and Bruch (1911) established the Fuerte Quemado subtype. It is obvious that the study of the large unpublished collections, such as that of Muniz Barreto, of the Museo de La Plata, will permit a better classification than that proposed by Dr. Bregante in her thesis in 1926. Such a classification should be based on the shape rather than on the decoration of the urns, as is demonstrated by Boman's (1908, 1:311) finds in the Valley of Tinti (Valley of Lerma).

Published studies show that the distributions of these three types do not coincide. Santa María urns are most widespread, extending from La Poma (the northern limit of Salta) to Choya (a southern point in Catamarca); but they center in the north of the Provinces of Catamarca and Tucumán. Belén urns tend to be limited to Catamarca, though some have been found in Amaicha (Tucumán), Famatina and Chilecito (La Rioja), and Angualasto (San Juan). San José urns are most restricted, being limited to the north of Catamarca (sites of San José and Andalguala) and reaching La Paya in the north and Andalgala in the south. The publication of the thousands of specimens in Argentine museums may, however, extend these distributions (Márquez Miranda, 1936).

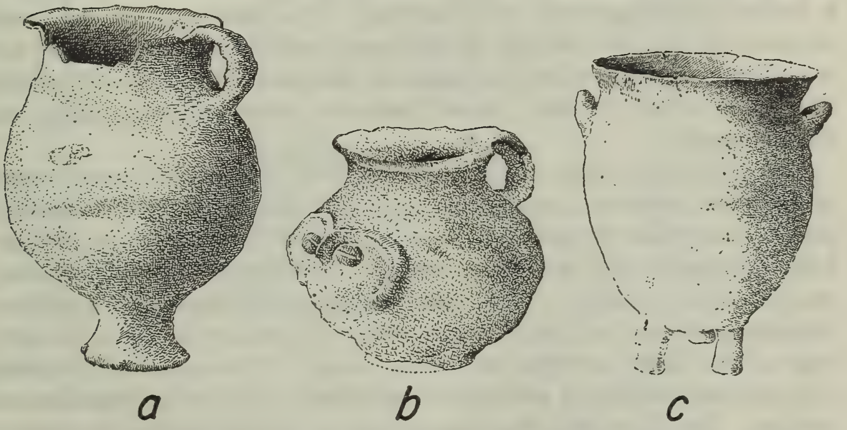

FIGURE 61.—*Diaguita* plain pottery. *a, c,* Utilitarian vessels; *b,* a jar with anthropomorphic modeling. (After Márquez Miranda, 1939, fig. 3.)

The pucos (so named by Ambrosetti) are more or less circular wide-mouthed jars, with a circular base smaller in diameter than the mouth (pl. 141, *g–j*). The height is more or less half the diameter of the mouth. The walls are generally outslanting, though sometimes partially straight, and are widest at the mouth. They usually lack lugs. Salas (1941) has recently described them.

Plates of various sizes (these are different from the pucos), pots, jars, and other items of so-called cooking ware complete this summary (fig. 61).

We must stress the importance of the presence of aryballos. These are so similar to those from Cuzco and other sites of the *Tahuantisuyu* that they might be taken for them. Not all of them were imported, however; possibly the *Diaguita* potters had learned to make them. There are also so-called aryballoid vases, which differ from aryballos in their larger base and cruder manufacture. Such specimens show the great cultural influence which the *Inca* civilization had on regions which it never managed to conquer politically.

Among the most artistic *Diaguita* ceramics were those found at Los Barreales (pl. 142). In the sites of La Ciénega and La Aguada (Debenedetti, 1931), and of La Toma and La Puerta (Márquez Miranda, 1945), all in the Departmento de Belén, Province of Catamarca, were found two types of fine and splendidly decorated pottery. One type has white or light gray decoration on a gray or dark background; the other type of decoration is brown or reddish and black on a yellowish background (polychrome). The first type is the more outstanding for the novelty of its shapes and decoration, for the extraordinary fineness of its clay, and the thinness of its walls, which ring like china when struck. Even Barreales stone objects exhibit an artistic touch.

Except for large urns and decorated bowls (pucos), the greater part of San Juan ceramics consists of crude and thick pottery. It usually occurs as surface shreds, and is accompanied by a very fine, beautifully decorated, and well-fired ware. The excavated pots, however, are of inferior quality. With the exception of Debenedetti's archeological expedition in 1916 and the two by the author in 1937 and 1938, only a few, hasty surveys have been made. Systematic excavations and the publication of results to coordinate existing information are lacking. On the whole, San Juan ceramics are the crudest and rarest of the various subareas of the *Diaguita* region.

Metallurgy.—The *Calchaquí* had a more varied and abundant metallurgy than other *Diaguita* groups. They used gold, silver, and, especially, copper, the last with tin alloys. Among the most beautiful specimens are the large ceremonial axes (toki) (pl. 143, *a–e*) and the cailles or breast or forehead plates (pl. 143, *f*), an example of the latter from Chaquiago, now in the Museo de La Plata, having special artistic merit. Copper objects include shields (pl. 143, *g–i*), tumi or knives with semicircular blade (fig. 62, *b*), needles with an eye opened after casting, axes of various sizes with a gorge and lateral wings to facilitate hafting (fig. 62, *e*), starlike club heads, awls, chisels (fig. 62, *a*), jingles, bells, manoplas (knuckle dusters), and others. The knuckle dusters and plates are entirely native elements. The others were borrowed from *Inca* types.

The metal was crushed on stone tables (marays), reduced in wind furnaces (huayras), and cast in molds. Some of the latter are preserved in museums. The mixture with tin was empirical. The analyses show a variation that triplicates its proportion in the same series of objects. Generally, the alloy is below 5 percent. One must

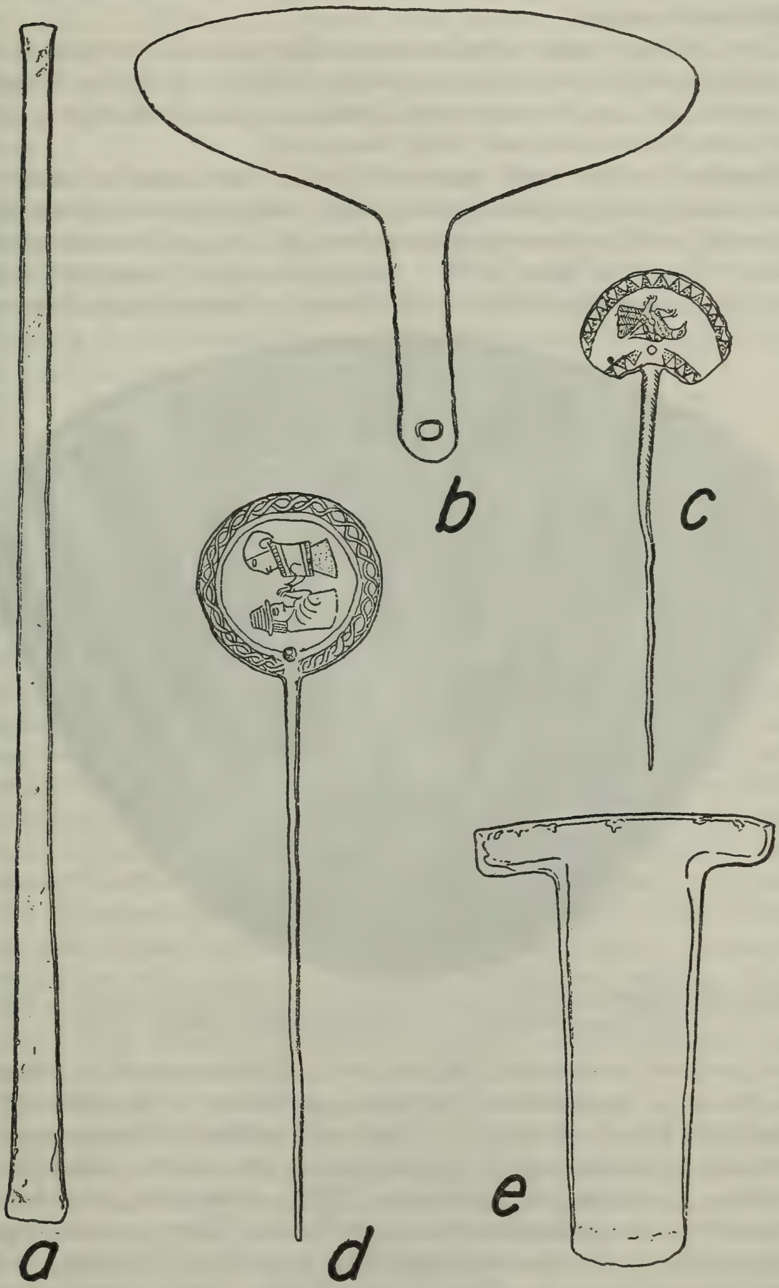

FIGURE 62.—*Diaguita* metal instruments. *a*, Chisel; *b*, knife, or "tumi"; *c*, *d*, pins, or "tupus"; *e*, small hatchet or ax. (After Márquez Miranda, 1939, fig. 19.)

consequently accept with reservation Ambrosetti's (1905 a) term "Calchaquí bronze."

The *Calchaquí* region also has tupus (fig. 62, *c*, *d*), pectoral disks, figurines, bracelets, and rings of gold and silver. Gold was wrought in sheets. In Los Barreales were found gold and silver objects similarly wrought in sheets and richly decorated.

Stonework.—The most important tool is the large ax made of hard, heavy rock (quartzite, granite, etc.) with a beveled cutting edge and usually with a three-quarters groove (pl. 144, *g-i*) but sometimes with a full groove (Salas, 1940). Some ax heads are beautifully decorated, e. g., one discovered at Huaycama. Decoration is, however, more frequent on mortars than on axes. Mortars are either vertical (pl. 144, *a*, *b*) or horizontal (metates), according to the direction in which they have been carved. They are provided with stone pestles. Tombs have yielded small zoomorphic representations, called illa or amulets. According to Ambrosetti (1897), these were intended to bring about the multiplication of the herds. There are also small human figures. A few stone masks have been found, for instance one from Fuerte Quemado. Bolas stones (libes), spindle whorls, beads (guaycas), stone hammers, arrowheads, and spear-thrower hooks are among other stone objects. In the subarea of Los Barreales, stone jars and mortars have anthropomorphic and zoomorphic decorations.

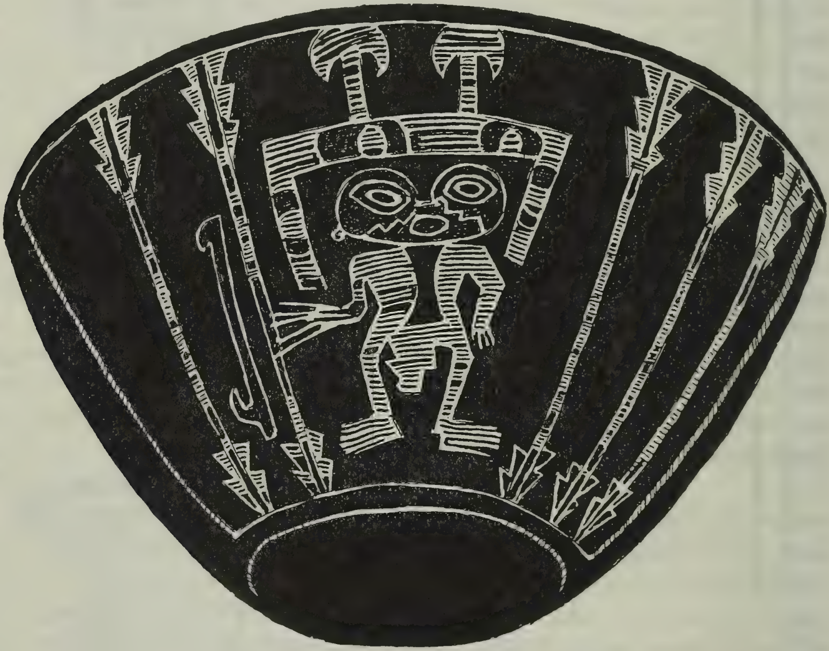

FIGURE 63.—*Diaguita* Barreales black incised ware from La Aguada. A man with a spear thrower. (After Debenedetti, 1931, pl. 32, a.)

Weapons.—The *Calchaquí* were essentially warlike. (See Warfare p. 651.) Their main weapon was the bow and arrow, but they may rarely have used the spear thrower and javelin. In close fighting they used clubs with annular or star-heads of stone or star-heads of copper. From the forts (pucaras), they rolled rocks down on the enemy.

The Los Barreales subarea differs from that of the *Calchaquí* in weapons (Márquez Miranda, 1942–43). Black decorated jars from the former offer indirect evidence of the frequent use of the spear thrower (fig. 63) and dart instead of the bow. There is also a doubtful indication of the use of the throwing stick or so-called boomerang (pl. 142, *b*). As among the *Calchaquí*, head trophies were used to frighten the enemy and to exalt one's own courage (pl. 142, *c*).

SOCIAL AND POLITICAL ORGANIZATION

All historical sources agree that the *Diaguita* lacked any permanent government. They were divided into many groups, each made up of a variable number of tribes, which were governed by caciques. Their number must have been great. In the Calchaquí Valley alone, an area about 30 leagues long, Lozano (1873–75) mentions a large number of tribes, each totally independent of and more or less chronically hostile to the others. This regime of independent hordes was superceded by a general alliance of all the local caciques under Juan Calchaquí. This leader had been baptized by the Spaniards, but, when the latter increased their maltreatment of the Indians, he called together all the caciques of his "nation," and rose against them. Another alliance was formed under Pedro de Bohorquez, the false "Inca," a Spanish adventurer who banded with the natives and even deceived the Governor, Mercado y Villacorta. Another was made under the orders of Cacique Silpitocle. The rebellion under Bohorquez was the most dangerous, being led by a White man. Bohorquez managed to call to arms 117 caciques, though two caciques of the *Pular* and all those of the *Paccioca* were absent. Thus, the threat of the Spaniards served to unify the natives, provoking their united efforts against the Europeans.

The authority of the cacique was absolute. When he surrendered or made peace, he carried with him all his tribe. If he were taken prisoner and released, the gratitude of his people was enormous. His prestige rested on his personal conduct. Like all warlike people, the *Diaguita* esteemed gallantry. Lozano (1873–75) tells us of a cacique who was abandoned by his men because of cowardice, and who threw himself from a cliff, preferring death to permanent dishonor. The authority of the cacique increased during a war, when his power was absolute. According to Bárzana (1885), the caciques obtained power through inheritance and "sons succeeded their fathers and the brothers if they did not have sons." This seems to suggest a real governing cast, a fact not proved by other evidence.

The family.—Little is known of the composition of the family. Polygyny seems to have been general, and occurred in sororal form according to the statement that "if a man marries a woman with many sisters, all of them must be the wives of the husband of the oldest sister." The levirate was the corollary of this: when a man died, his brother became the husband of all these women. Bárzana (1885) adds:

> Among these fierce people I found something good and worth praising: they marry when they are grown up, and they know women very late. It is not because of the fear of God, whom they do not know, but because they say that to indulge in that vice and to eat flesh makes people old, and thus they have great strength.

In the light of modern knowledge, this statement seems to indicate a long period of preparation and initiation for men, with required chastity, until the tribal rules were fulfilled and the man became an initiate.

Del Techo (1673) states that circumcision was practiced among the ancestors of the natives found by the Spaniards, and that special ceremonies, in which the tribal shaman participated, were performed when young persons reach puberty.

The Spanish census shows that the *Diaguita* family consisted of only 4 or 5 persons. These data obviously come from a time when polygyny had been abolished by the White invader and when the regime of encomiendas, a disguised slavery, was unfavorable to expanding families.

SICKNESS, DEATH, AND BURIAL

The *Diaguita* did not believe in natural death. To them death was caused more or less secretly by an enemy. Hence, suspicion of witchcraft within a family and between families and tribes often led to bloody fights.

Sick people were cured by the tribal doctor, who also was a witch. Nothing, however, is known of the native therapeutics. When the cure failed and the patient was about to die, the relatives began a period of vigil, keeping watch and drinking. This evidently was intended to protect the sick man from the malignant forces which threatened him, for Del Techo (1673) says that they fixed spears around the place where the patient was lying, so that death could not reach him. If these precautions were unsuccessful and death occurred, laments and cries started. Food and drinks were placed near the corpse and special herbs were burned.

According to Lozano (1873–75), the mourners, dancing and jumping, approached the corpse and offered it food, but seeing that he did not touch it, ate it themselves. These ceremonies lasted for 8 days, after which the burial was performed.

The corpse was placed in a pit or funeral chamber. He was clad not in his own clothes but in those given by friends. Fearing invisible forces, the survivors burned down the house in which a person had died to prevent his return. To placate the dead, they mourned him for a year in the European fashion, that is, by wearing black clothes. The corpse was flexed, tied, and placed in the funeral chamber. In sites along the periphery of the *Diaguita* area, there are a few secondary burials in large, crude, undecorated urns, which are totally different from the elegant urns used for infants.[2]

WARFARE

The importance of the military architecture of the *Calchaquí* has been mentioned. Fortresses (pucaras) occur in other parts of the *Diaguita* area. The pucara of Los Sauces, described by Boman (1916), is in La Rioja.

The arrival of the Whites brought about the formation of large tribal alliances. In Bohorquez's time, there were more than "six thousand very strong warriors," and their proportion to the general population was very high, for other documents speak of 4,000 warriors in a population of 12,000. There is, however, no general census of either the population or the warriors, because the hostilities prevented its being taken.

These wars all had the character of total warfare. The Spaniards tried to provoke internal division among the natives, and obtained the allegiance of the *Colalao* and *Tolombon*, which provoked a real civil war among the natives. The *Paccioca* and *Tolombon* fought a long time against the *Quilme*, which caused Governor Mercado to remove these friendly Indians 10 leagues to the north, in the direction of Salta. The traitor Bohorquez revolutionized the military techniques and tactics of the natives. The natives did not fight in the open field, preferring surprise attack and hasty retreat to the impregnable heights at the first sign of defection. Their favorite weapon was the bow and unpoisoned arrow. They were good archers and could transfix a man wearing "two skin armors and a coat." They besieged some newly founded Spanish cities by turning the course of a river and thus destroying the Spaniards by thirst. They fought in groups, sending in fresh reserves from time to time during the battle.

Bohorquez taught the Indians to use firearms, and contact with their adversaries familiarized them with the horse. Fearful of and unsuccessful in handling horses at first, the natives finally became skilled horsemen and used their mounts in warfare. For close fighting, they used stone-headed or star-shaped copper clubs (pl. 144, *c-f*).

Women and children entered battles not only to encourage the men but also to fight with them. Del Techo (1673) says that they walked behind the men with lighted torches and, if necessary, forced them to return to the battle. According to Lozano (1873–75), they displayed more zest, courage, and audacity than men.

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[2] See Willey, "The culture of La Candelaria," this volume, p. 661.

The episodes during the phase of the Conquest of Tucumán known as the Great Rebellion reveal another aspect of total warfare: the reciprocal destruction of economic resources, especially the adversary's food supplies. The Indians burned the wheatfields of the Spaniards, and the latter destroyed the Indian's maize crops. When the natives learned to sow and collect European wheat, it, too, was destroyed. Narváez (1885) explains that the Indians also adopted barley, for which reason the Spaniards attacked the natives during September and December, the driest months, because "the enemies were about to harvest and to defraud them was the best war which could be waged," as the Governor don Felipe de Albornoz wrote to the King in 1633. They were also attacked when they prepared their expeditions to collect algarrobo pods, their most important food after maize.

During retreats, the Indians attempted to carry with them any fallen warrior in order to cry over him. They tortured captives with "exquisite torments."

Defensive tactics consisted mainly of withdrawing into their pucaras or forts, from the top of which they threw and rolled rocks down on the enemy. In battle, they protected themselves with shields. (See Metallurgy, p. 646.) In the second siege of the city of La Rioja, the Indians covered their retreat from Spanish cavalry "leaving them stuck in the mud with the facility and means provided by the river," that is, by breaking the dams and flooding the country. This war was characterized by great mobility, by surprise and improvisation, and by the unbreakable spirit and energy on both sides. To end it, the Spaniards were obliged to resort to an *Inca* method: they deported the natives to distant regions, where there was a large population of Whites and other natives. Some groups were sent to Alto Perú. One of these walked back from Potosí to Tucumán to continue the fight. Another contingent was settled near the present city of Quilmes, near Buenos Aires, to which it gave its name. (See Márquez Miranda, 1942–43, for a detailed study of *Diaguita* warfare.)

ESTHETIC AND RECREATIONAL ACTIVITIES

Art.—The talents of the native artisans are obvious. Their art is expressed in petroglyphs (pl. 146), which are numerous in the whole *Diaguita* area and which are found to the southern limit of the Province of San Juan. Though many petroglyphs have been reproduced, we do not have a corpus of them. The most important themes are anthropomorphic and zoomorphic. The first are conventionalized men, both clothed and naked and always wearing great feather headdresses. Of zoomorphic representations, llamas are most common.

Some animals, such as rheas and pumas, are represented not by their outline but by their footprints. There are also geometric figures, perhaps extreme conventionalizations. These include circles with or without a central dot, triangles, straight lines, curves, zigzags, frets, etc., the significance of which is unknown. Sometimes the elements are grouped in general scenes, as in the famous caves of Carahuasi. Boman (1908) has listed the places where petroglyphs were found during his classic work. Subsequently, only isolated references have been published.

Some persons have seen these representations as true ideographic writing, others as plans to hidden treasures. Neither intrepretation can be defended. Against the first is the circumstance that there are innumerable signs, no two being identical, except such elements as the triangle and the circle, which have an ecumenic distribution. In writing, the signs and combinations of signs should be repeated with certain frequency. Against the second interpretation, it can be said that no so-called plan has ever been deciphered or has ever led to the uncovering of a treasure. Most likely, as Boman holds (1908, 2:170–77), these representations were made for their own sake, some revealing exceptional artistic capacity but none carrying significance as conventional writing. They might have had a religious purpose.

Other manifestations of decorative art occur in the so-called Santa María and Draconian Styles, which appear on ceramics and sometimes also on metalwork.[3] These styles must be reexamined in the light of the mass of materials in the great archeological collections. For the present, Santa María and Draconian will remain convenient descriptive terms. The most artistic ceramics of the region are represented by the fine specimens of Los Barreales.

Jars, vertical mortars, etc., present anthropomorphic and zoomorphic figures in relief, some with true artistic character. Some large smoking pipes also have anthropomorphic as well as geometric decoration.

Music.—As the *Diaguita* were warlike, their music was probably military. Lozano (1873–75) states that the sound of pingollos and trumpets preceded battles and warned the Spaniards. The *Cayapan* also played music when torturing a prisoner. Panpipes were made of reed or clay (pl. 142, *f*, *g*); a very few stone panpipes occurred in the northern part of the *Diaguita* region. Ambrosetti (1907–08) mentioned a specimen of stone panpipes from La Paya, where he also found one of wood, an exceptional discovery because of the perishable material. An "offertory tablet" discovered at La Paya in the same site is decorated with a man playing the panpipes; so is the famous "jar-icol" of Amaycha, first described by Quiroga (1901, p. 169).

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[3] Debenedetti (1931) objected to the term "style" saying that, "although it was commonly accepted in Argentine archeology these styles had not yet been adequately defined nor their distribution stated, the deductions and attempted generalizations not having included the analysis of many rare specimens and those which have been selected failing to include those which were most representative."

Whistles, ocarinas, and the notched flute, or quena, were used throughout the whole *Diaguita* area. The Indians also used trumpets made of a gourd and bone tube (Ambrosetti, 1896–99). They also used jingles made of wild walnut shells (*Juglans australis*) and drums.

Dancing.—We know little about dances. Del Techo (1673, p. 148) says that the *Diaguita* danced during death watches. Lozano (1873–75, 1:429), with his priestly outlook, mentions dances as events of sacrilege and wild drinking. The discovery of a wooden mask in the site of Atajo (pl. 142, *h*) and of stone masks at Fuerte Quemado and elsewhere suggests ritual dances, but chroniclers are silent on the matter.

RELIGION

Narváez (1885) does not believe that "they had idols which they worshiped," and Del Techo (1673, p. 147) and Lozano (1873–75, 1:429–30) state that they worshiped the Sun. Del Techo also states that they rendered homage to the Thunder and Lightning, and to trees decorated with feathers. Lozano (1873–75, 1:429–30) states that the anthropomorphic representations on disks (caylles) were images of their gods, but nothing precise is known on that matter. As a result of the chroniclers' systematic indifference to primitive religion, their silence is not surprising.

PRIESTS AND SHAMANS

The chroniclers mention magicians and witches who also were doctors. These functionaries lived in secret places and carried on terrible bacchanals, with excesses of alcoholic drinks which plunged them into a stupor. The overintoxication brought about bloody fights with rocks and arrows. During the orgy, the priest presiding over the feast performed a fertility rite for the fields, when he offered the head of a deer, bristling with arrows to the Sun. The head was given to another priest who, by accepting it, had to preside at the next feast. Another custom involving a solar cult is that of presenting the head of a slain enemy to the Sun (Bárzana, 1885).

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THE CHACO-SANTIAGUEÑO CULTURE

By Fernando Márquez Miranda

INTRODUCTION

The distribution of the Chaco-Santiagueño culture is not well known (map 1, *No. 13*). In a general way it includes the present Argentine Province of Santiago del Estero and may extend into certain parts of the nearby Chaco region, although archeology in the latter area has not yet revealed its presence there (Márquez Miranda, 1942). Knowledge of the Chaco-Santiagueño culture comes from archeological investigations of sites near Río Dulce, Province of Santiago del Estero (map 5).

The culture has developed adaptations to the peculiar features of its environment, which therefore must be sketched.

ENVIRONMENT

The Province of Santiago del Estero is now largely deforested, but at the Conquest had large forests which produced a more favorable climate, a more uniform temperature, and more ample resources for native life. It is uniformly flat, with no notable elevations, and, with the exception of the Salado River, which flows into the Paraná River, its rivers do not drain outside the area. The Río Salado cuts the province obliquely from north to south, and is more or less paralleled throughout its course by the Río Dulce, which is second to it in importance. These rivers are fed by rainfall in the Cordillera and pre-Cordillera region which causes periodic floods of the Río Dulce, and for that reason both rivers have a torrential period which deeply influenced the life of the natives settled along their banks. A few hydrographic anomalies are worth mentioning: the nitrate deposits, the Laguna de los Cisnes, and the wide zone of marshes and lowlands into which the Río Dulce is lost. The salt marshes (salinas), the Salar de Alamisky, the swamps of Figueroa, and the complex of lagoons (bañados), salt marshes, and salty pampas along the Río Salado extend from Clodomira and La Cañada to the marshes of Pellegrini. These zones of depression, which are crossed obliquely by both rivers, cause the rivers to diverge in a complex network of channels, especially in summer when floods create new courses.

Frengueli (1940) has carefully studied the geomorphological nature of this terrain.

The principal human settlements were near permanent sources of water. Scarcity of water forced routes of travel to follow the rivers and the adjoining marshes. Of the two rivers, the Río Dulce (Sweet River) was preferred, for, as its name implies, it has a good supply of crystal-clear water from the eastern slopes of the Aconquija Mountains. The Río Salado (Salty River), although having a small salt content, extremely low water, and frequent interruptions, was useful because its great length (more than 2,000 km., about 1,250 miles) facilitated communication between important zones, from the distant puna to the Río Paraná, whence drains an enormous river basin.

At short intervals along the left bank of the principal course of the Río Salado are several thousand mounds, each 1 or 2 m. (about 3 to 6 ft.) high, which form an irregular and almost continuous band, usually about 1 to 3 km. (about 2/3 to 2 miles) wide. These mounds are irregularly elliptic, the longer axis oriented in the direction of the nearby beds or depressions. Their surface areas vary from ten to hundreds of square meters. In Merced de Tacana, Frengueli (1940) measured mounds 32 and 53 meters (about 100 and 170 ft.) long, respectively. Their composition and structure are variable, and they can be classified as sandy, marshy, marshy-loess. All have two features in common: a base of very fine, compact dark to gray, somewhat micaceous silt which is generally cracked into clods newly solidified by infiltrations; and an upper layer which is aeolian (wind-borne) soil, a true loess formation. It is a friable darkish-gray earth which is easily reduced to dust and is held together by very small roots. In the sandy mounds, the soil gets thinner and sometimes is mixed with the surface sand. In the depressions, it is almost transformed into slime but everywhere it is almost a continuous covering, 15 to 60 cm. (6 to 24 inches) thick. What differentiates the mounds is the material. The sandy mounds consist exclusively of fine-grained, wind-borne sand, with a small admixture of loess. The marshy mounds are composed of a porous, greenish-gray slime with dark streaks. The earth, sometimes light and spongy, is irregularly stratified into layers and small, extremely thin laminae, 1 to 2 cm. (⅖ to ⅘ in.) thick. The marshy-loess mounds consist of two principal layers: a lower layer of dark-grayish dusty loess and an upper layer of medium dark, very porous, friable loess. These three types of mounds occur in different zones, but all are unquestionably natural formations. They cannot be interpreted as tumuli, that is, as artificial formations built by the ancient inhabitants. These conclusions, drawn from the geomorphological examination of the mounds, are of extraordinary importance, as we shall see, to the analysis of the archeological problem of the Chaco Santiagueño.

LINGUISTIC AND ETHNOGRAPHIC SUMMARY

According to the famous letter dated 1574 of Father Bárzana to Father Sebastian, his provincial, the most common languages were *Tonocoté* and *Sanaviron*. The first was spoken by the *Tonocoté* and *Lule*, at least by many of them; the second, by the *Sanaviron* and *Indama*, who could also speak *Quechua* with the missionaries. These linguistic data permit determination of the tribes which inhabited this territory. There is no doubt that some groups of *Sanaviron* reached the Río Salado. The *Tonocoté*, who seem to have been the more numerous, served in Nuestra Señora de Talavera and near Concepción. In addition to these sedentary and agricultural natives, there were a few peaceful *Diaguita*, who like all the other *Diaguita* groups, spoke *Cacan*. There were likewise nomadic and warlike *Lule* groups, who built fortresses of wood. This sketchy tribal summary is completed with the *Chiriguano*, also warlike, who reached the Río Salado. (See Volume 3.)

Varied culture traits allow us to surmise with Frengueli (1940) the existence of a heterogeneous population, consisting of different ethnic elements. The Río Dulce and Río Salado were routes of penetration to the interior of this culture area. Most of the archeological traits are of Andean origin, but there are Amazonian infiltrations, such as feather dress, poisoned arrows, and burial of adults in urns. Other routes of penetration were the large series of lagoons, cañadas, marshes, and depressions, which, principally in summer, are flooded by waters from the northern Chaco.

CULTURE

SUBSISTENCE ACTIVITIES

The basis of subsistence seems to have been agriculture, collecting wild foods, and herding. Farm plots were in unirrigated marshy grounds along the Río Dulce and Río Salado, where the Indians took advantage of floods. The margin of the Río Dulce, which was the more populated, was especially suited for cultivation, for the floods penetrated the barrier of mounds, producing a fringe of marshes on which crops could be sowed. The cultivated plants were, in order of importance: maize, quinoa, beans, and pumpkins. Wild foods that supplemented the diet were algarrobo pods, chañar, tuna fruits, pascanas, wild roots, and honey.

To this vegetable diet was added the products of herding llamas, rheas (which it is possible to domesticate), and turkeys, The chronicles do not give hunting methods, but we know that the Indians fished by various methods: nets, pesqueras (weirs), bows and arrows (in shallow waters), and by hand.

ARCHITECTURE

Archeological investigations and historical sources reveal closely spaced, palisaded pueblos, inside which were grass huts, large and small corrals for herds, and fields for archery practice. Insufficient archeological data prevent giving more details.

DRESS AND ORNAMENTS

Men's and women's clothing differed. Men wore a rhea-feather skirt, a collar of the same material covering the chest, and a feather or woolen cape or cloak. The first two garments are like those worn by the *Tupi* and other Amazonian tribes, but the feather cape is an element of the Andean feather art. The cloaks were decorated with beads (chaquiras) of vulture bones, forming a sort of fringe. Women's dress consisted of an ankle-length loincloth, wrapped around the waist, a cape (manta) covering the chest, a perineal band, and various ornaments.

Skull deformation was uniformly the tabular erecta (fronto-vertico-occipital) type. Two specimens of the collection of 20 skulls are only slightly deformed. The others are heavily deformed, being strongly plagiocephalous bipolar or crossed.

MANUFACTURES

Textiles.—Fabrics were woven of wool fibers of the llama and its relatives. None have been found archeologically, because of the humid subsoil, nor has a loom frame been found. There are, however, many stone, bone, and clay spindle whorls of different shapes and sizes, some of real artistic merit. The shape of the majority is a simple disk or a truncated cone.

Pottery.—Archeological pottery was first mentioned when Burmeister (1876) published finds of funeral urns and antiquities in Santiago del Estero and Tucumán. Subsequently, Ameghino (1880), Moreno (1882), Ambrosetti (1901), and Ten Kate (1896) dealt briefly with ceramics. Excavations have been numerous, however, only since the discoveries and investigations of the Wagner brothers. These authors have published their first volume (1934), so far the only one of a general work.[1]

The pottery (pls. 147, 148), undoubtedly the richest culture element in the area, consists typically of large vessels often used as funeral urns, pucos, bell-shaped jars (campunas), spindle whorls, and figurines, besides an abundance of surface and subsurface sherds. The large urns are generally subglobular, and fall into two groups: (1) crude jars of coarse clay and little decoration, but generally modeled on the neck and sometimes on the body; (2) very finely shaped, modeled and fired jars, with profuse painted decoration. This decoration is white and black, black and red, and polychrome. Most pucos are polychrome.

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[1] Serrano (1938) disagreed with the Wagners' interpretation and, in 1940, the Sociedad Argentina de Antropología published critical studies of the problem from all possible points of view in its "Relaciones," vol. 2.

The decorative elements are particularly interesting. The human figure is always very conventionalized, either being simply represented by the double superciliary arches (as on the Santa María urns of the neighboring *Calchaquí*), or by more complicated combinations, accompanied by serpentiform and ornithomorphic figures. The combination of the anthropomorphic with the two last zoomorphic representations produces a figure which the Wagners called "the anthropo-ornitho-ophidic deity." This figure is typical of the Chaco Santiagueño culture. On the other hand, some anthropomorphic representations, in which opposite ends of the double superciliary arch extend down to form or suggest the oval of the face, are identical to figures on *Diaguita* vases. Similarly, the hand element, which may also be a wing, is common among the *Diaguita*. The same is true of the polychrome decorations on pucos, the "tear streaks," and the flat lugs on many vessels (Márquez Miranda, 1936, 1940).

Metallurgy.—Though the Wagner brothers have never reported metal objects from the numerous sites, other persons have found copper. The presence of this metal is important in indicating the recency of the culture.

Bone objects.—Besides the spindle whorls already mentioned, the Chaco Santiagueño collections contain a great many beautiful bone arrow points, some of them of large size.

Stonework.—Because of the great importance given to pottery, little is known about stonework. Stone axes and mortars have, however, been reported.

Weapons.—The principal weapon for hunting and fishing as well as for warfare was the bow and arrow. Interestingly, there is littl mention of poisoned arrows. (For references, see Palavecino *in* "Relaciones de la Sociedad Argentina de Antropología," 1940.) The testimony of these authors is not repeated in later sources, as if the people who had used the poisoned arrow had become extinct. Because of the dangerous nature of the weapon, the historians' silence is not likely to be due to the weapon having been overlooked. We may infer that the poisoned arrow was recently borrowed from the Amazon and was little diffused. Father Lizárraga (1909 a, p. 637) adds that the bow was not large.

Glass objects.—Agri ("Venetian") beads are another element not mentioned by the Wagner brothers. Nonetheless, a local collector, Dr. Arganaraz, has found quantities of them in many sites. Such finds have great archeological value, proving that the sites were occupied into the Conquest Period.

SOCIAL AND RELIGIOUS CULTURE

Social organization and religion are not mentioned in the historical sources.

BURIAL

Archeology shows secondary burial of adults and infants in large, crude undecorated urns, an Amazonian trait, and secondary burial of adults directly in the ground. These urns, unlike the special *Calchaquí* vessels, were common jars, which were not made for burial purposes. They were covered, not with elaborate, painted pucos in the *Diaguita* fashion, but with any piece of pottery, the convex side being adjusted to the mouth of the urn.

The secondary inhumations of adults were placed in the natural mounds previously described. Burials in other kinds of sites are rare, and are always in special burial urns. These urns are large and globular with a conical base and a rather small mouth, and are covered with a big inverted puco. The cultural material is found inside the urns, including fragments of pottery, bones used for food, and charcoal. In the direct inhumations, skeletons are oriented west and east, and in two different postures. In the first, the body is placed on its left or right side, the head toward the east, and the legs extended or in a forced flexed position, which suggests that they were tied. The other position is semiraised with the occiput, the upper vertebrae, and the superior part of the back to the east, the legs flexed, the arms open, and the body supported on the elbows, as if the corpse were about to rise.

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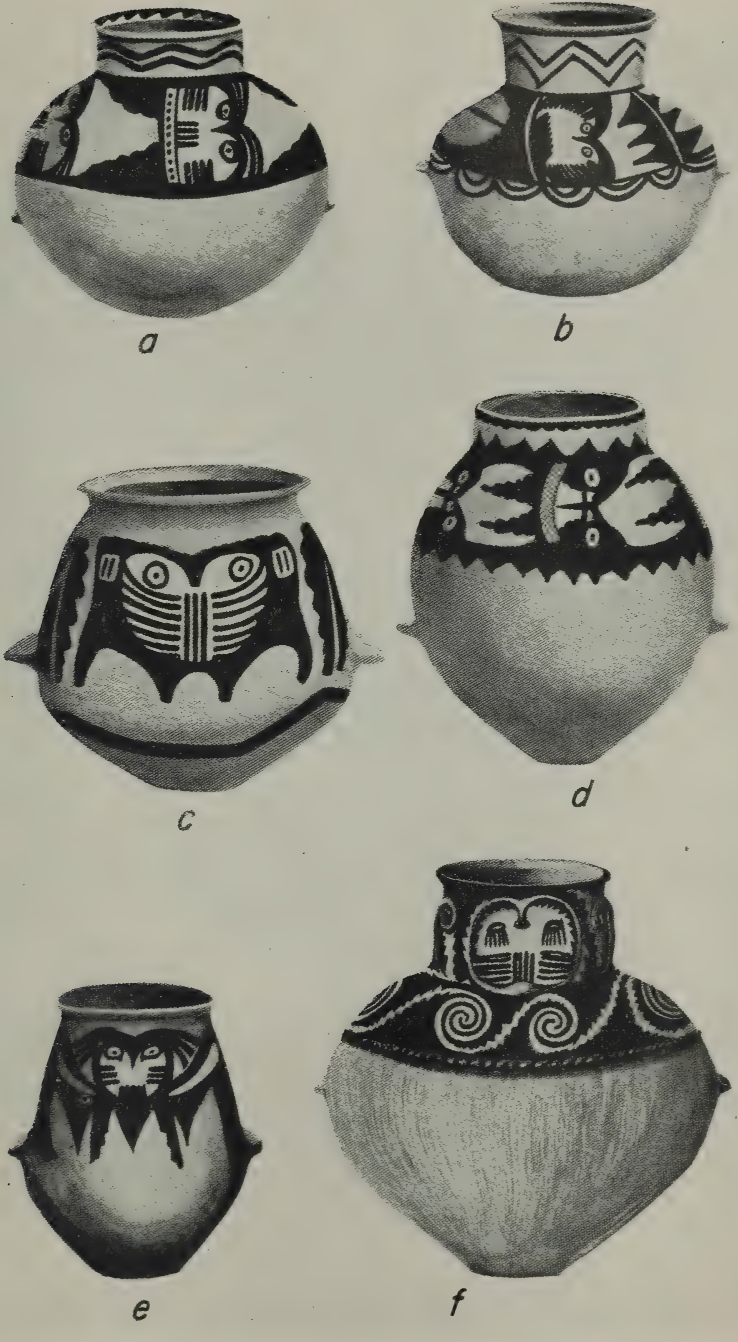

PLATE 147.—**Chaco-Santiagueña painted funerary urns.** (After Wagner, E. L. and D. R., 1935.)

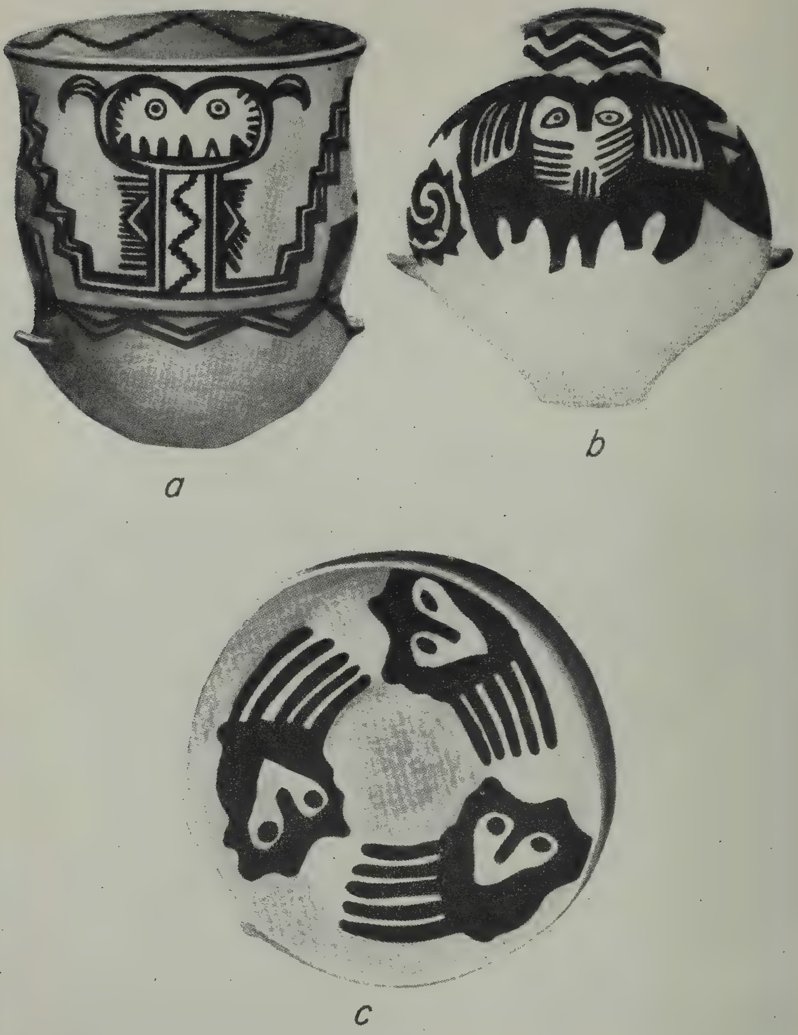

Plate 148.—**Chaco-Santiagueña pottery.** Item *c* is bowl interior. (After Wagner, E. L. and D. R., 1935.)

THE CULTURE OF LA CANDELARIA

By Gordon R. Willey

INTRODUCTION AND CULTURAL POSITION

From present evidence, the archeological culture known as La Candelaria centers in the southeastern part of the Argentine Province of Salta, in the department of La Candelaria, from which the name is derived (map 1, *No. 12*). La Candelaria type remains, chiefly burial urns, have been found in the plains and rolling hill country all along the eastern foot of the Andes from the city of Tucumán in the south almost to the city of Jujuy in the north. The term "La Candelaria" was first given to this particular archeological complex by Métraux (1930 b) when serious excavations were made in the region by Schreiter and Métraux. Schreiter's work (1934) is of importance, not only for its local value, but also because it related previous data from the plains of Salta and southern Jujuy to the newly defined La Candelaria cultural nucleus. These earlier data include some of the finds at Pampa Grande (Salta), the westernmost site at which La Candelaria culture has been found in strength (Ambrosetti, 1906); the excavations near Rosario de la Frontera (Salta) (Torres, 1919); and Boman's (1908) work in the Valle de Lerma near the city of Salta and in the Valley of San Francisco in the Province of Jujuy.

To the west of the La Candelaria region lies the *Diaguita* territory of the Andes. There seems to be little overlapping between these two cultural zones, although the site of Pampa Grande has two levels: the earlier contains remains of La Candelaria type while the later is *Diaguita*. There are no La Candelaria type sites within the *Diaguita* zone, proper, but isolated La Candelaria specimens have been found as far west as the great *Diaguita* center of Quilmes in northwestern Tucumán (Rydén, 1936). North of La Candelaria territory is the archeological culture of the Quebrada de Humahuaca. To the southeast is the distinctive archeological zone of Santiago del Estero. To the east, the distribution of La Candelaria type remains is not known but presumably shades off into the Gran Chaco.

The people who left behind the La Candelaria type of remains were agriculturists who lived in a region where irrigation was not essensential. The dwelling sites are very numerous in the Department of La Candelaria, and many of them indicate fairly large villages. No evidences of dwellings other than a few aligned stone slabs in the earth have been revealed. Houses must have been made of perishable materials. Potsherds and stone tools are scattered over the old village areas. Stone axes are particularly abundant.

Burials in large urns are often found within the limits of village occupation, although sometimes they are found isolated from any other cultural remains. The common burial of adults, as well as children, in the big pottery urns is one of the features which set La Candelaria apart from *Diaguita*. La Candelaria ceramics also differ significantly from *Diaguita* types. This is true of both the burial urns and the other vessels. However, resemblances to *Diaguita* are present, and it is the general opinion that the closest cultural linkage of La Candelaria is with *Diaguita*, especially with the Barreales division of the culture. (See incised pottery illustrated by Debenedetti, 1931.) La Candelaria is comparable to the Chaco-Santiagueña culture of Santiago del Estero; however, La Candelaria and Chaco-Santiagueña would appear to be two branches from a mother, *Diaguita*-like, family rather than either one having given rise to the other. The trait of burial of adults in urns has led to speculation concerning *Guaraní* origin for La Candelaria (Boman, 1908; Torres, 1919). However, aside from this similarity of burial practice, there is little resemblance, and the differences between *Guaraní* and La Candelaria ceramics are marked. It is known that the *Guaraní* migrations took place on the eve of and during the Spanish Conquest and were restricted to the eastern foothills of the Bolivian Andes. No *Guaraní* groups went farther south than their 17th-century limits. There is no archeological or historical evidence of their presence in the ancient Province of Tucumán (Coni, 1925; Métraux, 1930 a).

No European artifact associations with La Candelaria are found either in the La Candelaria region or at Pampa Grande. Neither is there any evidence of *Inca* influence. The prehistoric inhabitants of La Candelaria either had left the region before the *Inca* expansion or they were geographically beyond its reach. Rydén (1936) agrees with Uhle (1912 b) in considering Candelaria as wholly pre-*Inca*; Boman (1923) believes the lack of contact to be due to spatial rather than temporal factors.

The stratification of graves at Pampa Grande shows the *Diaguita* style clearly overlying the La Candelarian, but there were some associations of Santa María (*Diaguita*) vessels in the earlier La Candelaria graves. *Diaguita* undoubtedly was later than La Candelaria at Pampa Grande, but the two styles were probably roughly contemporaneous, each within its own area.

As the terminal date of the La Candelaria culture is vague, it is difficult to attribute the archeological complex to any ethnic group. Presumably, the bearers of La Candelarian culture were driven out of the region before the Spanish contact. The evidence at Pampa Grande suggests that *Diaguita* expansion from the west may have been the cause. Or on the other hand, incursions of people from the plains to the east may have been responsible. There is also the possibility that protracted drought in the region drove these agriculturists northeast into the Chaco. At the time of European contact a group of sedentary farmers known as the *Tonocoté* inhabited the general area in which La Candelarian archeological remains are found. Very little is known of these people. Much later, in the 18th century, a nonhorticultural people, the *Lule-Tonocoté*, dwelt in the same region. The relationships of the *Tonocoté* with the *Lule-Tonocoté* have been discussed at some length (Rydén, 1936; Métraux, Handbook of South American Indians, vol. 1, pp. 227–228). It seems unlikely that the *Lule-Tonocoté* were descendants of the *Tonocoté*. Although there is very little supporting evidence, the probabilities favor the earlier *Tonocoté* as being the descendants of the people of the La Candelaria culture.

An interesting and unique physical characteristic of the people of the La Candelaria culture was their beards. Anthropomorphic vessels (fig. 64, *a*) showing bearded figures have come from the region. (Métraux, 1930 b; Schreiter, 1934; Rydén, 1936.) Historical confirmation of this for the general region, at least, is found in Barzána (1885) who, in 1594, referred to the Indians in the vicinity of the city of Tucumán as being bearded "like the Spaniards." That genetic strains of the old population continue into the present-day inhabitants of this section of Tucumán and Salta is suggested by the number of bearded individuals among the Indians and Mestizos who live there at the present time. (Personal communication from Alfred Métraux.)

SOURCES

The data are virtually all archeological. The standard work on La Candelaria is the monograph by Rydén (1936). This is a detailed and thorough analysis based on original field work in the region, supplemented by studies of museum specimens. The present summary is written chiefly from this source. Additional references pertaining to the La Candelaria region, including those previously mentioned, are Ambrosetti (1906), on the Pampa Grande site, Boman (1908), Torres (1919), Métraux (1930 b), Rydén (1934), and Schreiter (1934). References which throw light upon the problem of La Candelaria in relation to the other areas or problems are: Ambrosetti (1897), Nordenskiöld (1902), Debenedetti (1931), Bruch (1913), Uhle (1912), Boman (1923), Coni (1925), Métraux (1930 a), and Serrano (1938).

THE REGION

The Department of Candelaria, in southeastern Salta, is situated in an intermediate ecological position between the Andean Highlands to the west and the low-lying country of eastern Salta. The Candelaria River is the central watercourse of the Department, and the drainage is enclosed between the Sierra de Medina, an Andean outpost to the east, and the main Andean block to the west. The terrain, while not mountainous, is broken and hilly. Rainfall is markedly seasonal, being heavy in the summers. At this time the runoff cuts deep barrancas along the river and stream beds, and general surface erosion of the slopes is great.

The flora and fauna are similar to those of the low country rather than the Highland. Algorroba trees, various types of quebracho, and several species of cactus with edible fruits are among the important plants. The guanaco and the rhea were the largest game animals of the region.

CULTURE

NATURE OF SITES

Sites are exceedingly numerous in La Candelaria, and are found in all types of terrain in the valley. More sites have been located on the tops or slopes of high ground, but this may be attributable to the fact that the river bottoms are both heavily silted and seasonally cut and washed away. The hilltop and slope sites all show advanced erosion, and the bottomland sites which have been located have been buried under deep layers of alluvium.

Surface evidences of La Candelaria sites include potsherds, mortar and grinding stones, burial urns partially washed out of the ground, and scanty structural features.

POPULATION AND SUBSISTENCE

The archeological uniformity of the La Candelaria sites indicates a single cultural period for all the sites yet investigated in the valley. Either this period was very long and stylistic changes were slow or the La Candelaria drainage supported a large population for a brief time.

The abundance of grinding stones and mortars in the sites and a pottery surface decoration which consists of corncob markings on the unfired clay vessel indirectly attest to a knowledge of maize and its use as a food. General similarities between La Candelaria culture and the adjacent *Diaguita* make it likely that other elements of the Andean agricultural pattern were transmitted from the *Diaguita* to the inhabitants of La Candelaria.

DWELLINGS

At two sites in La Candelaria, Rydén (1936) found series of stone slabs set in the earth in alignments suggesting that they were either the lower foundation walls of houses or retaining walls built to keep a small level area of earth on a slope from washing away. With reference to the first possibility, Rydén thinks that La Candelarian houses may have been semisubterranean with the stone slabs set in the ground above the level of the floor.

At other sites stone slabs were set in the ground forming a crude circle with a diameter much too small for a dwelling. These may have been placed to encircle a burial urn or may have been fireplaces.

MANUFACTURES

Pottery.—La Candelaria pottery is tempered with crushed rock and mica. In the large burial urns this tempering material is coarse, but in the smaller vessels the rock is more finely pulverized. Most of the burial urns and other vessels are made of a well-fired gray, blackish-gray, or sometimes brownish-gray ware that, from the description, would appear to have been reduced in firing rather than oxidized. A small percentage of burial urns and other vessels, and most of the bowls used to cover the urns, are bricklike in color. Vessels of this brick-red ware are decorated in the same manner as the gray ware, and are undoubtedly a part of the La Candelarian complex. Most of the pottery is slipped on one or both surfaces. The slip is usually the same color but of a different shade than the original ware.

Burial urns vary in specific detail of form (fig. 65), but all are "pot-shaped" with either conoidal or truncated-conoidal bases. Most of them are a little deeper than wide. They range in height from around 20 inches (50 cm.) to over 3 feet (1 m). The point of maximum diameter varies from a bulge just above the base to a shoulder placed well above the mid-point of vessel height. There is usually a constriction of the vessel mouth, but some of the urns have rims which are recurved outward. Most of the urns have two handles, placed on opposite sides of the body, and set high or low on the vessel walls. Some handles are crescent-shaped lugs; others are flat loop handles, horizontally oriented. Decoration is mainly by incision and usually consists of zigzag, chevron, or criss-cross lines forming a border just below the rim on the exterior surface. There are occasional examples of anthropomorphic decoration carried out in relief and incision. Some urns are striated or marked with a corncob.

The brick-ware bowls used as covers for the urns are of a medium-deep, open variety. They have an interior slip and are often striated on the exterior surface with close-spaced, narrow, shallow grooves.

Rydén (1936) has classified the smaller pottery vessels as to form. One of the most distinctive of the La Candelarian shapes is the "vessel with bulges (2 or 4)" (fig. 66, *a*, *b*). Other forms are "one-handled symmetrical vessels," including jars and flat-bottomed beakers (fig. 66, *f*, *g*, *h*); "hanging vessels," which are wide-mouthed bottles or globular jars (fig. 66, *k*); "cylindrical or bottle-shaped vessels" (fig. 66, *c*); "cup-shaped vessels," which are reminiscent of the kero form of the Bolivian altiplano (fig. 66, *e*); "asymmetrical vessels," including "shoe-forms" with human and bird effigy faces; "bailer-shaped vessels," or scoops with handles; "intercommunicating vessels" (double vessels) (fig. 66, *l*); "vessel with massive conical projections" (fig. 66, *d*); "vessel with pan-handle" (fig. 66, *i*); "zoomorphic vessels" (fig. 66, *j*); and "bowls with anthropomorphic or zoomorphic ornamentation" (fig. 64, *a*, *b*, *d*).

Anthropomorphic and zoomorphic modeling in the round, or in relief, is of a rudimentary nature, and would indicate no long tradition

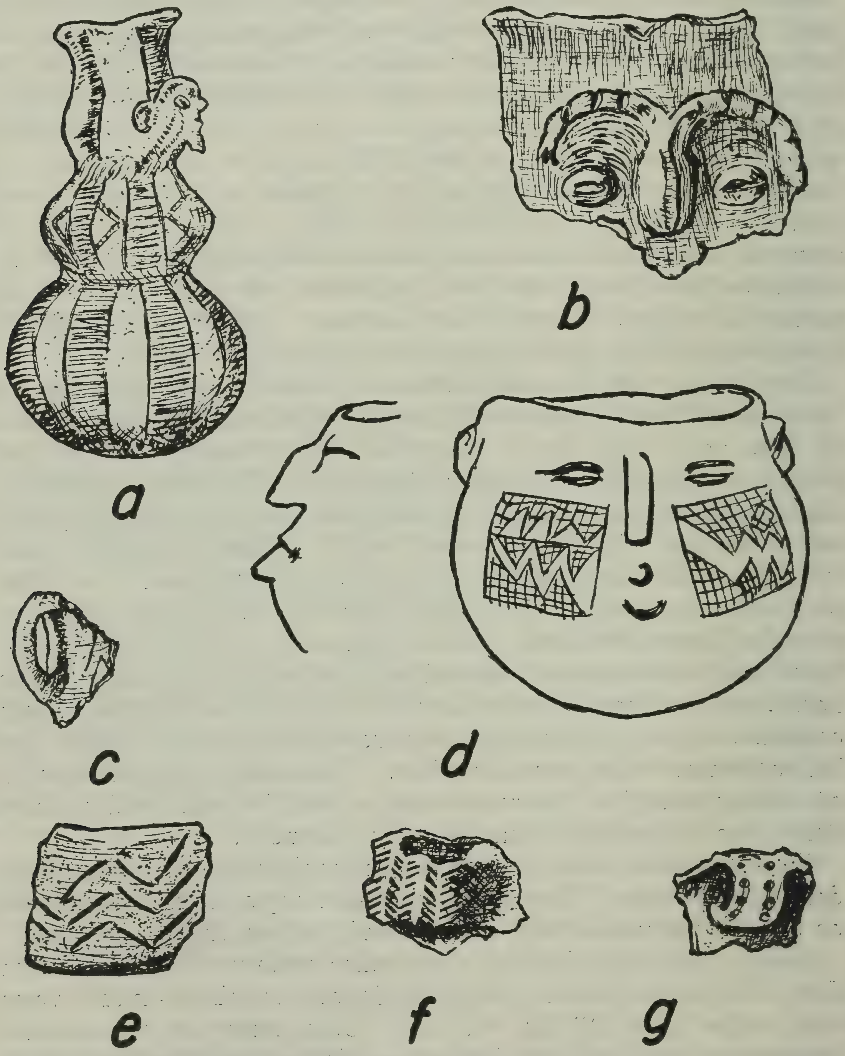

FIGURE 64.—La Candelaria ceramics. *a*, Painted bearded-effigy jar; *b*, human face done in relief on vessel; *c*, vertical handle; *d*, face jar; *e*, *f*, horizontal handles with incised decoration; *g*, vertical strap handle. (Redrawn from Rydén, 1936, figs. 117, 111, 104, 109.)

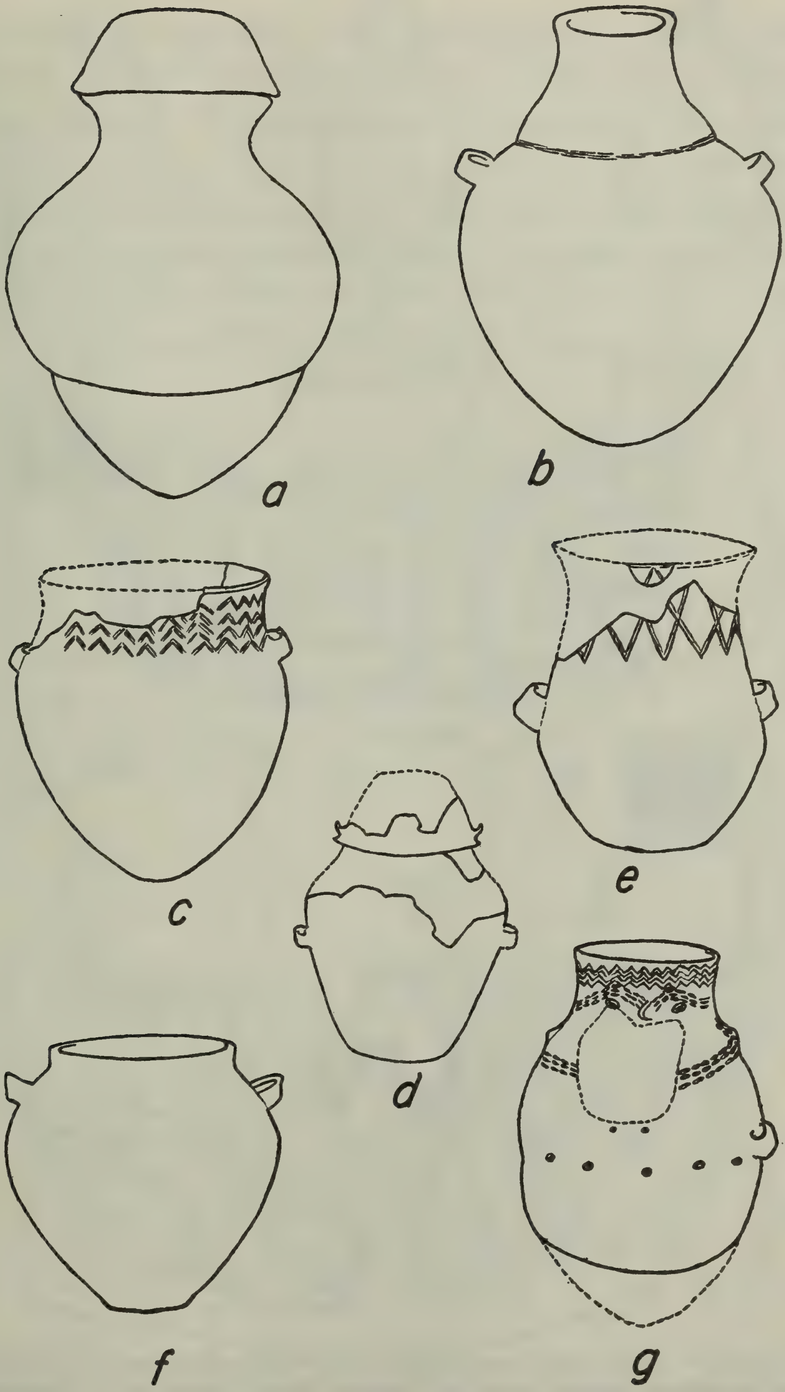

FIGURE 65.—La Candelaria burial urns. (Redrawn from Rydén, 1936, figs. 45, 38, 70, 63, 51, 36, 46.)

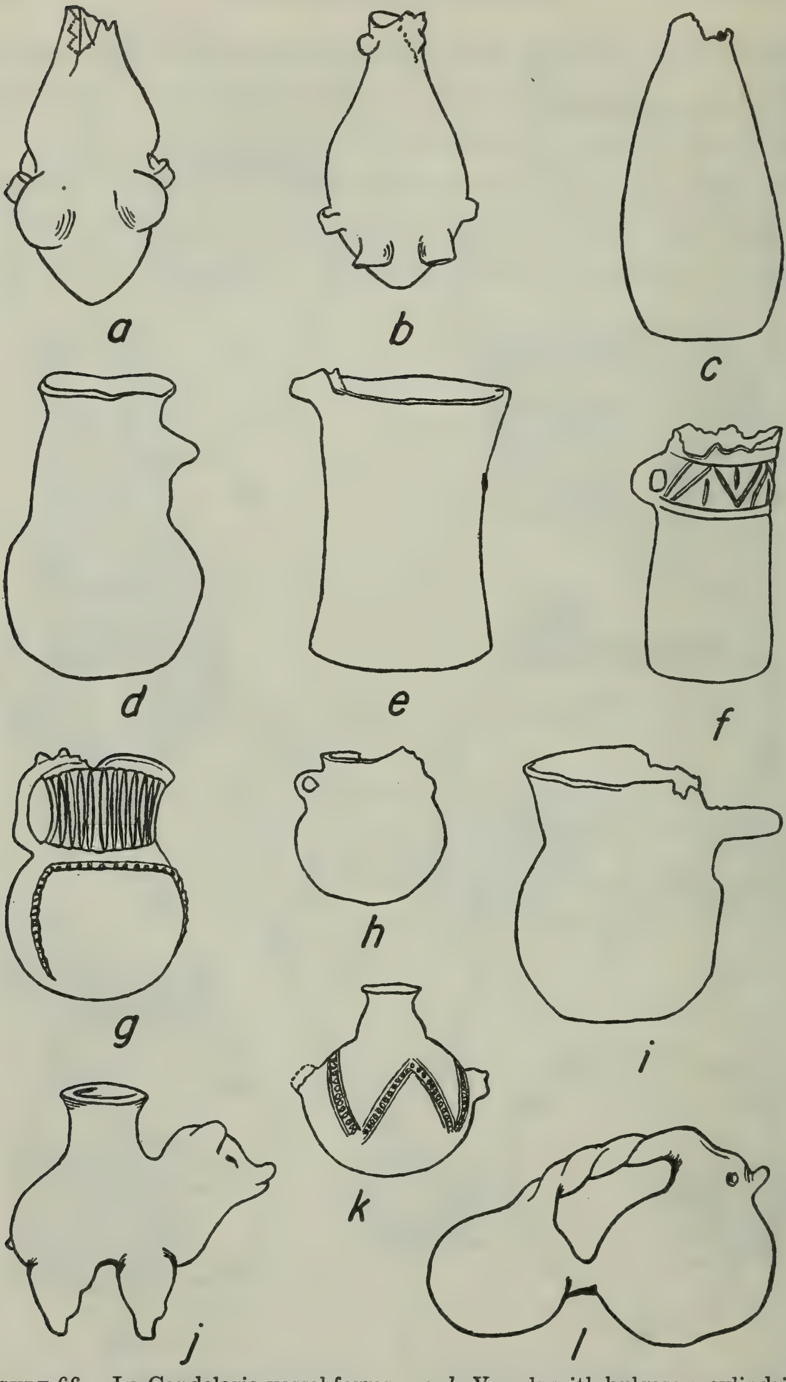

FIGURE 66.—La Candelaria vessel forms. *a, b,* Vessels with bulges; *c,* cylindrical, or bottle-form vessel; *d,* vessel with massive concial projections; *e,* cup-shaped vessel; *f, g, h,* one-handled vessels; *i,* vessel with pan-handle; *j,* zoomorphic representation; *k,* hanging vessel; *l,* intercommunicating, or double vessel. (Redrawn from Rydén, 1936, figs. 81, 90, 97, 91, 86, 98, 101, 88, 96.)

in ceramic representation. Incised designs are more frequent, better done, and more intricate on the smaller vessels than on the La Candelaria burial urns. The open, medium-deep bowls are the most elaborately decorated. The incision appears to be fine-line. There are two stylistic divisions. The nicer style of decoration on these bowls produces an artistic effect by contrasting undecorated areas with hatched or cross-hatched areas (fig. 67, *a*). These plain and hatched zones are arranged in geometric panels on the vessel exterior. Rectangles, diamonds, triangles, and other geometric or linear elements

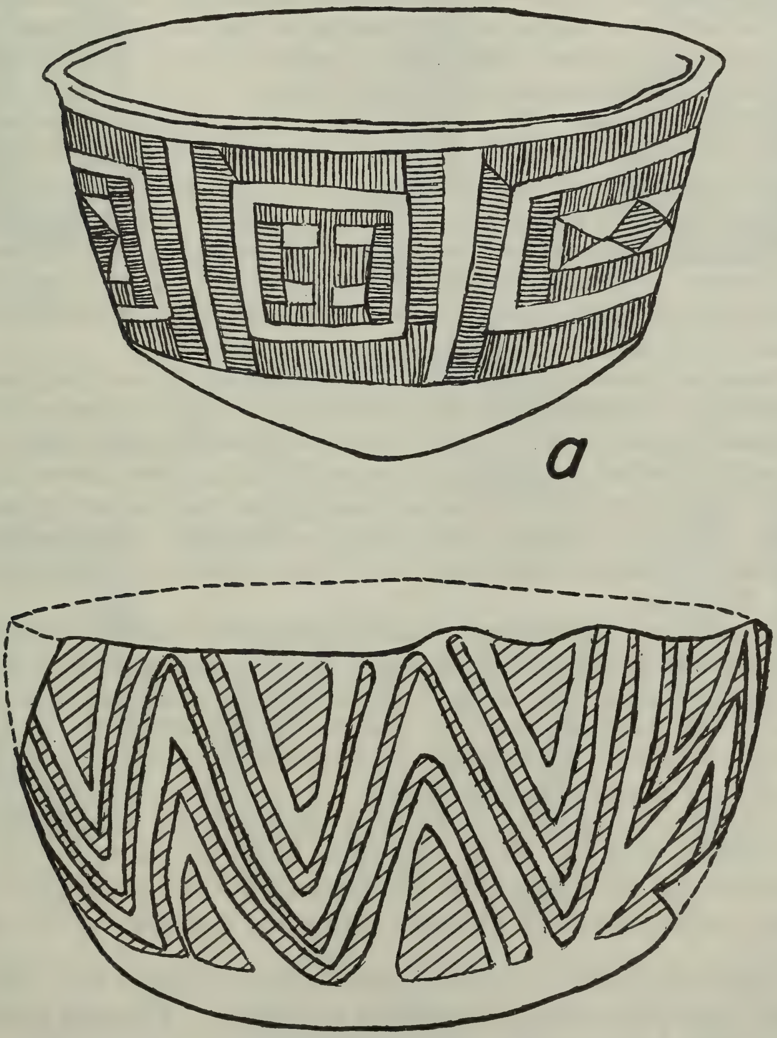

FIGURE 67.—La Candelaria decorated bowls. *a*, Finer incised ware (actual diameter 18 cms.); *b*, buff-colored, bricklike ware with red-brown ornamentation (actual height 10 cms. [4 in.]). (Redrawn from Rydén, 1936, figs. 28, 116.)

are the principal motives. The other stylistic division is more like the decoration of the burial urns; lines are wider spaced, less area is decorated, and the total design is simpler.

Some of the smaller vessels in the brick-red ware group have painted decoration of dark red or brown lines over a lighter brown or buff slip (fig. 67, *b*).

Miscellaneous ceramic objects.—Elbow-form tobacco pipes are a feature of La Candelaria culture. One of these (Rydén, 1936) has an inverted conical bowl, a stem which projects beyond the bowl, two nubs or feet under the bowl, a crude anthropomorphic design modeled on the bowl, and zigzag incised designs on the bowl and stem. A circular game counter made from a potsherd and a small human figurine were also recovered by Rydén (1936).

Objects of stones.—Three types of mortars or grinding stones were found in La Candelaria: (1) Mortars consisting of a conical or cylindrical depression in a movable rock or in live rock; (2) stones with elongated, shallow depressions; and (3) "pecanas," or two flat stones which were rubbed against each other with the grain placed between the stones. Cylindrical pestles were used in the first type,and flat mullers were used in conjunction with the second type. Miscellaneous whetstones are also found on La Candelaria sites.

Stone celts or axes are of two principal types: (1) Those which were hafted on a straight handle and which are the regular three-quarter grooved type (fig. 68, *a*, *b*); and (2) those which were really adzes and were elbow-hafted and are grooved on one broad and two narrow sides (fig. 68, *c*). Some chipped rather than ground stone axes were also found (fig. 68, *e*). Rydén (1936) shows one T-shaped ax and another ungrooved specimen which may have been an adz or an ungrooved celt (fig. 68, *d*).

Curious and miscellaneous small stone objects include: Polished elongated or egg-shaped stones which may be bola or sling stones; irregularly shaped but worked stones; hemispherical and spherical stones; flat pendants, more or less circular in outline (fig. 68, *f*); grooved cylindrical pendants (fig. 68, *g*); cylindrical beads; and crudely carved and decorated human figures.

A single, small-stemmed and barbed projectile point was recovered by Rydén (1936) (fig. 68, *g*). Schreiter (1934) figures three projectiles from La Candelaria: two are stemmed but not barbed, one is large and unstemmed. Projectile points are generally rare in the region.

Objects of shell.—Circular shell beads or spangles and olive shells which were strung as necklaces were found. The shell species are of both Atlantic and Pacific varieties.

Objects of bone.—Rydén (1936) identifies only a weaver's baton, probably made from guanaco bone.

Objects of metal.—A thin, rectangular metal plate with a perforation near one edge came from a La Candelarian burial urn. It was analyzed as bronze. This is the only known metal object of La Candelarian provenience (Rydén, 1936).

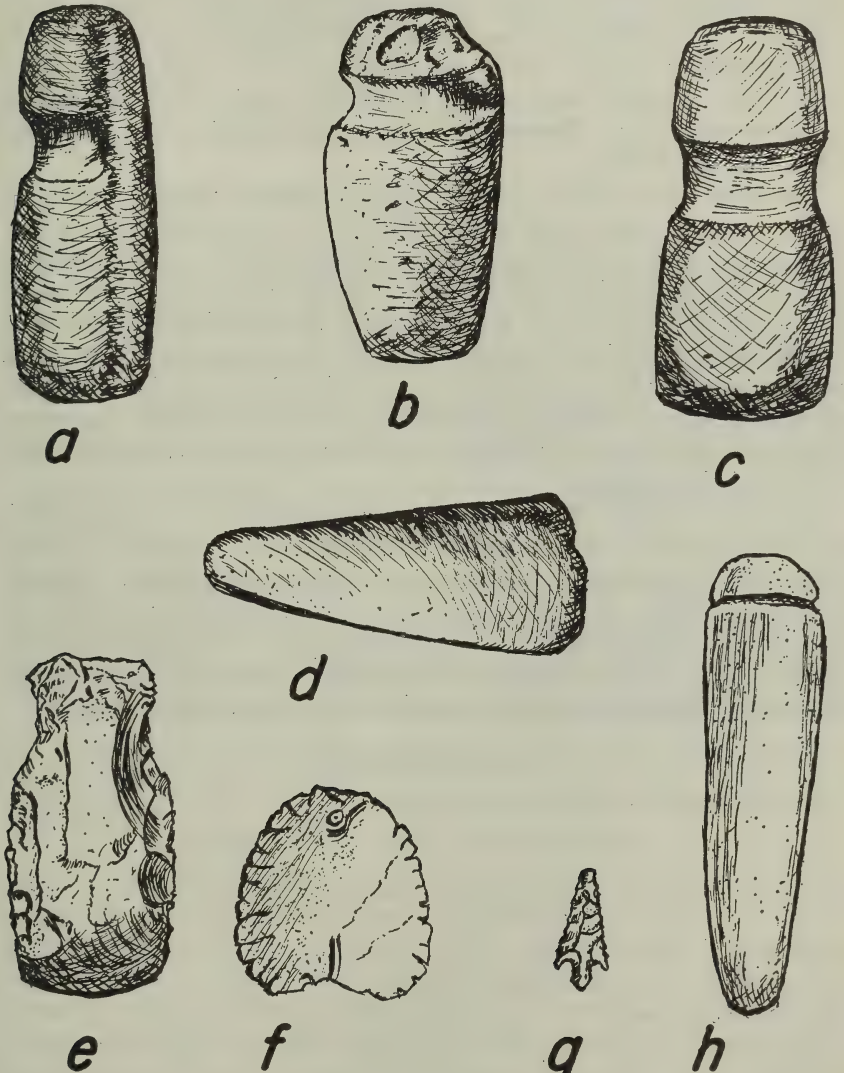

Figure 68.—La Candelaria stonework. *a, b,* Three-quarter grooved axes (length 13 and 27 cms. (5 and 10½ in.) respectively.); *c,* adz, grooved on one broad and two narrow sides (length 11 cms. (4⅜ in.)); *d,* ungrooved adz or celt (length 11 cms. (4⅜ in.)); *e,* chipped-stone celt (length 9 cms. (3½ in.)); *f,* gorget (length 6 cms. (2⅜ in.)); *g,* projectile point (length 32 mms. (1¼ in.)); *h,* grooved pendant (length 12 cms. (4¾ in).). (Redrawn from Rydén, 1936, figs. 125, 123, 127.)

BURIAL

The dead were interred in the large pottery urns described above. The treatment of the body was primary. Individuals of all ages and both sexes were buried in this fashion. Burials are found most often in the village area, although occasional burial urns are found unassociated with evidences of occupation. The depth to which the urns were originally buried cannot be determined, as most burials have been found partially washed out in eroded terrain or deeply buried by river sediments. Presumably the graves in which the urns were placed were not deep.

The urns were covered, usually with an inverted pottery bowl. In a few instances stone slabs were used to cover the mouth of the urn. Occasional stone slabs found in the vicinity of the urns suggest that some of the graves into which the urns were placed may have originally been stone-lined. A great many of the burial urns had a hole in the bottom. This may have been the result of purposeful breaking, and, as such, could be interpreted as "killing," or releasing the spirit of the vessel to accompany the dead. It is also possible that these holes were the result of attrition and wear while the vessel was used for household purposes.

Most of the burial urns contained small amounts of charcoal which had been placed in the container along with the deceased at burial. Only about 10 percent of the urns contained burial artifacts. Pottery and stone objects were the usual grave gifts. Schreiter (1934) describes an unusually rich La Candelarian grave from Santa Barbara which contained four obsidian arrowpoints, a stone ax, 63 cylindrical greenstone beads, sheet mica, miscellaneous rocks, and charcoal.

BIBLIOGRAPHY

For bibliographic references, see page 663.

THE COMECHINGÓN AND THEIR NEIGHBORS OF THE SIERRAS DE CÓRDOBA

By Francisco de Aparicio

INTRODUCTION

The explorers of the Argentine territory gave the name "Provincia de los Comechingones" to the mountainous region included today in the Provinces of Córdoba and San Luis (map 1, *No. 14*; map 5). Here, as in other instances, they called the region after its inhabitants. The men, characterized by specific anthropological features, and the region are clearly treated as a unit in passages of the old chronicles. "We went to the mountains and the Province of the Comechingones, who are bearded people," records one of the first explorers.

TRIBAL DIVISIONS

Ancient chronicles include among the inhabitants of this area not only the *Comechingón* but the *Sanaviron*, *Indama*, and others. But space is too brief to present here the complicated relationships between these tribes and their subdivisions. For the purposes of the present cultural summary, it will suffice to treat all the prehistoric and protohistoric tribes of the Sierras de Córdoba and San Luis as an ethnic unit. Any cultural differences between these tribes were insignificant.

GEOGRAPHY AND ENVIRONMENT

The Sierras de Córdoba compose three parallel cordons which run in a north-south orientation for over 4 degrees of latitude (lat. 29° to 33° S. at approximately long. 64° W.). With their intermediate valleys, these mountain ranges include approximately 30,000 sq. km. (about 11,500 sq. miles). These Sierras de Córdoba constitute the most eastern and southern extension of the Pampean Sierras. The Sierra de San Luis is a part of the same orographic unit, and lies off to the west of the southern tip of the Sierra de Comechingones, separated from the main mountain mass by the valley of Concarán.

The mountain cordons lie transversely to the direction of the predominating eastern humid winds. These winds are a decisive factor in climatic conditions, so that the differences in humidity and temperature are more marked when one crosses the Sierras from east to west than when one travels north or south in the longitudinal valleys. The humid, fertile plains to the east of the mountains present a violent contrast to the arid semidesert country lying to the west of the mountains. Within these extreme limits of east and west, in which life conditions vary fundamentally, are the mountains proper, where the terrain is relatively uniform and the natural resources are more or less equal. However, even the mountains are a varied region. Great differences in altitude are encompassed within a relatively small area, and climatic change is correlated with altitude. In a few kilometers, one may pass from high, rocky, and desolate pampas, covered only with gramineous plants, to lower valleys which lack trees but which have a pleasant and hospitable aspect and a far more benign climate. On these valleys open small lateral quebradas, or secondary valleys, formed by the transverse foothills. These quebradas sustain a magnificent vegetation and are nourished by rivers and streams. Here are concentrated all the natural conditions for an exceptionally agreeable life.

The numerous streams which could be easily diverted for irrigation owing to the pronounced declivity of the land made the region an ideal place for simple horticulturists. In each mountain site, the living conditions were directly determined by quantity and availability of water. In Northwestern Argentina, farming "a temporal" (without irrigation) is extremely hazardous and succeeds only in exceptional years, so that irrigation is vital for agriculture.

The flora of the Sierras de Córdoba is abundant and varied, and it provided the native food collectors with many important items. Hunting must also have been economically significant, although no single species of the varied mountain fauna had an importance comparable to that of the algarroba among vegetable foods.

SOURCES

The country whose natives we intend to study was discovered by the companions of the unfortunate Diego de Rojas. After the death of de Rojas on the plains of the Salavina, the expedition continued under the orders of Francisco de Mendoza. It is in the chronicles of the deeds of this group that we find the earliest information on the Sierras de Córdoba and their inhabitants.

Unfortunately, no direct chronicle of this great expedition has survived. Those who took part in it did not write of their adventures, although lesser expeditions had official chroniclers. The historians of the civil wars of Perú, however, give an account of this episode in order to introduce the actors who took part in the Peruvian wars. Diego Fernández (El Palentino), Pedro Gutiérrez de Santa Clara, and Pedro Cieza de León are, therefore, the accidental chroniclers of the expedition. To their accounts must be added a document of great importance, the "Probanza de Méritos y Servicios de Pedro González de Prado" (Levillier, 1919 b).

The three above-mentioned authors had as their only source of information the testimony of the survivors of the expedition. They differ in the order of the events, and it is obvious that there is confusion in the accounts. The account of Diego Fernández (1571) is very clear, and is, perhaps, based on written testimonies. After telling of the adventures and sufferings of those who took part in the expedition through the plains of Tucumán and Santiago del Estero, it says:

> They crossed the Andes of Tucumán to the foothills of the sierra. They crossed them and found that the Indians of that region were brown, tall with beards like Christians. They do not have poisoned arrows.

El Palentino (1571) gives us ethnographic data of great interest about Córdoba, and tells us the name of the inhabitants, "Comechingones," misspelled sometimes as "Chinchagones."

Gutiérrez de Santa Clara (1850) in various passages is so close to El Palentino that he seems to have had the same informant, but his account is somewhat inferior, as the narrative is involved and mixes up the order of events.

Cieza de León (1909) begins his account with the expedition in the "Guerra de Chupas" and ends it with the "Guerra de Quito." Everything here is surprisingly vague, confused, and incorrect for so great a chronicler. In this chaos of data, there are a few items of great interest, but others must be used cautiously.

The "Probanza" of Pedro González, presented in the city of Cuzco in 1548, 2 years after the expedition, is particularly valuable, especially where anthropology is concerned. This document, published by Levillier (1919 b) is a rich account of Diego de Rojas' expedition, and, with El Palentino's report, to which it is superior, constitutes a unique body of information. While Francisco de Mendoza continued his discoveries toward the Río de la Plata, Prado remained in the Province of the Comechingones in direct touch with the natives, whose cause he abetted. This gave him authoritative knowledge of their customs, especially their warfare.

Some years later the country was finally occupied and cities were founded. Jerónimo Luis de Cabrera extended the conquest toward the south and founded Córdoba. This governor showed more interest in Indians than most captains of his time. This explains the value of the "Relación e suma de latierray poblazones que don geronimo Luis de cabrera gouernador de las prouincias de los Juries ha descubierto donde va a poblar in nombre de Su magestad una ciudad." This anonymous, undated document was written at the time of the establishment of Córdoba, and if the author was not Cabrera himself, he must have been one of his lieutenants.

Don Juan de Matienzo in his "Gobierno del Perú" (1910) deals with the natives of Córdoba and gives some interesting data. Two valuable documents which supplement those mentioned above go back to the beginning of the colonization: "La relación de don Pedro Sotelo Narváez," an inhabitant of Santiago del Estero, written about 1583 (Narváez, 1915), and the letter of Father Alonso de Bárzana (1885), dated in Asunción, 1594.

These are the main sources on the *Comechingón* with a few statements in many other documents and chronicles, such as the "Descripción breve," by Lizárraga (1916), encomienda titles, judicial documents, cartas anuas, city council acts, etc.

ARCHEOLOGICAL INVESTIGATIONS

The ancient Province of the Comechingones is archeologically poor and, therefore, has not attracted much attention. In 1911, Outes reviewed all the material from Córdoba known to that date. Later G. A. Gardner (1931) conducted investigations in the northern Sierra, and published a meritorious work on the rock paintings. The present author spent several months on repeated occasions in the field in the Sierras de Córdoba and in the northern part of the Sierra de San Luis. The results of these investigations have not been published yet, but a summary of the culture of the ancient inhabitants of the mountainous region of Central Argentina has been given in Aparicio (1936). The present resumé is based mainly upon this last article, with some additional material.

CULTURE

GENERAL CHARACTER OF THE SITES

Only camp sites (paraderos, as they are called in Argentina) are found. There are no ancient pueblos and buildings comparable to those of Northwest Argentina. The sites are near streams or small springs; often plantations, dwellings, and other remains can be detected. The most abundant materials, however, are artifacts, food refuse, and isolated burials without constructions or funerary offerings.

SUBSISTENCE ACTIVITIES

The *Comechingón* were settled people and agriculturists. The only noticeable difference between the settlements, according to El Palentino (1571), was in the cultivation of their maize fields. Cieza (1909), Matienzo (1910), and later chroniclers confirm the practice of farming and call particular attention to the methods of cultivation. In the well-known "Relación" attributed to Cabrera, it is said that they are great agriculturists, and that "no year passes that they do not sow their seed in order to employ the ground at all times, whether there be water for irrigating or whether the land is simply left saturated by the flooding of rivers." This statement is probably exaggerated inasmuch as the "fields" of maize, beans, and quinoa were probably only small irrigable terraces. In Córdoba, there probably never could have been "tierra bañada," or land which was flooded by the rising of great rivers, as in Santiago. The account of Sotelo Narváez confirms this lack of true flood-plain farming.

Archeology also confirms this conclusion. No cultivated terraces or tablelands in the mountain region nor irrigation works of any extent have been found, but indubitable proof that they did exist is furnished by finds of a great many implements for crushing and grinding grain. The discovery of a subterranean earthenware granary discloses the method of storing and preserving grain.

The *Comechingón* were also herdsmen. When Cieza saw them they already "had large flocks of llamas and many fowls," a fact confirmed by other chroniclers. Native pictographs also represent these animals.

The algarroba was the most important wild vegetable food. Chañar, mistol, and other plants also supplemented agricultural products. Hunting guanacos, rabbits, deer, and other game was probably important, but fishing was not.

HOUSES AND CAMP SITES

No buildings have been found which can be irrefutably identified as pre-Hispanic or, at least, protohistoric. A great many vestiges of dry-masonry construction occur in the region, but, though these ruins appear to be old, native origin cannot be proved. Possibly, the lack of industrial remains in these ruins, which could serve to date them, is simply due to the archeological poverty of the region.

Present inhabitants believe that they are able to distinguish the "taperas de indios" (Indian dwellings) from the more recent buildings which are scattered throughout the Sierra. Their diagnostic feature is the type of foundation (cimiento). They call "cimiento de indio" a foundation built with perpendicular slabs forming two parallel rows in which the empty space between was filled with smaller material. According to the modern peoples, the Creoles never built in that style. Diggings in the interior of the "taperas" have, however, given only poor or negative results.

In both the Sierra de Córdoba and the Sierra de San Luis, modified natural shelters abound. These shelters, known in the region as "stone houses," are still used, with some modification, as temporary dwellings or as annexes to houses. Again, it is not known whether the additional features and modifications are the work of the aboriginal inhabitants or of recent dwellers. Potsherds, stone implements, and chips are found in the vicinity of these dwellings, but cannot be definitely related to the structural modifications of the natural shelters.

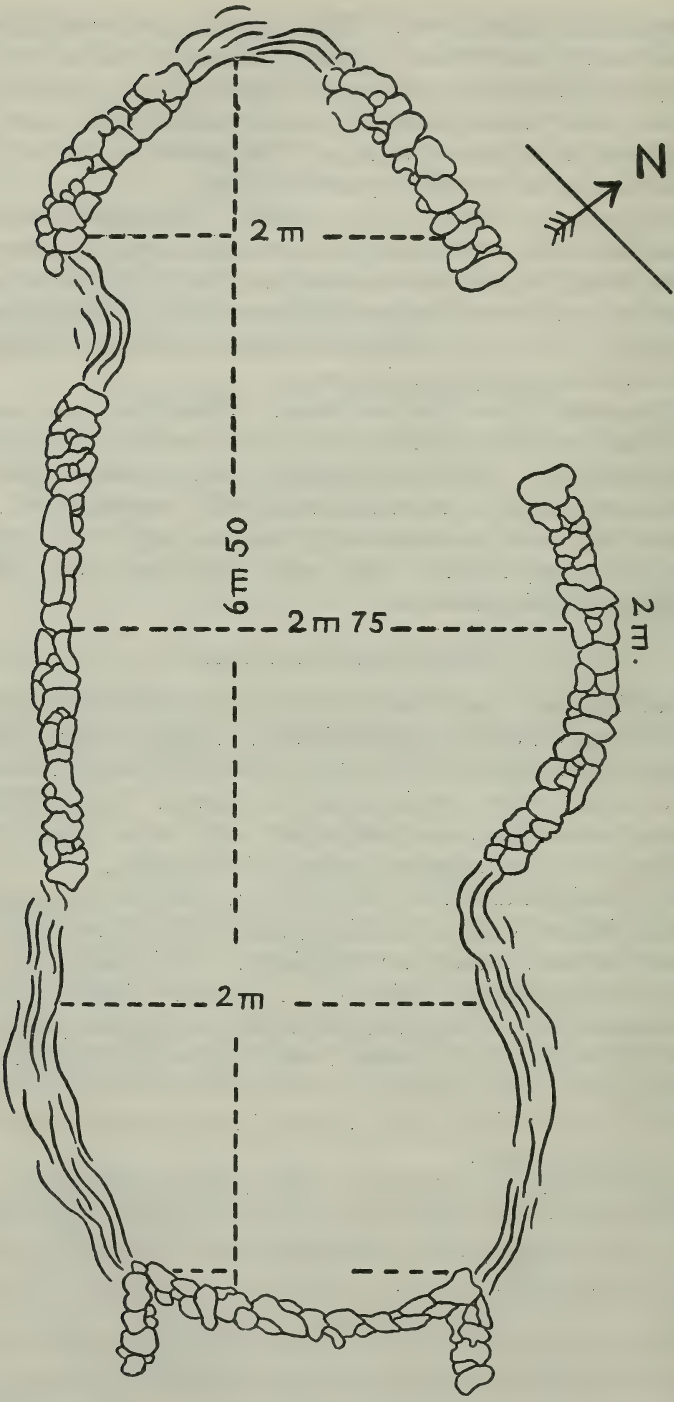

Figure 69.—Schematic drawing of the ground plan of a cave dwelling. At Intihuasi, Sierra de Comechingones, Province of Córdoba.

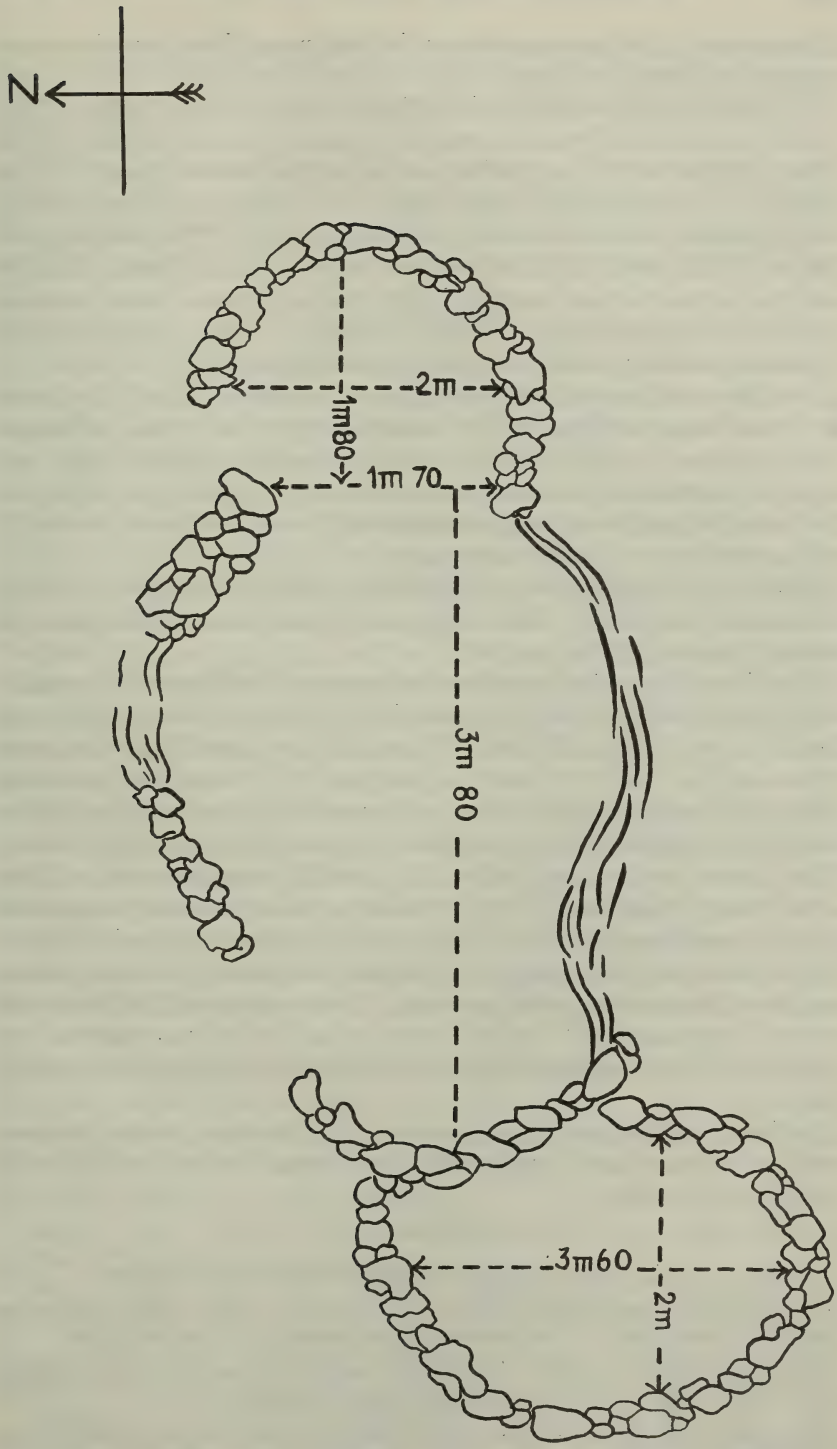
N
2m
1m80
1m 70
3m 80
3m60
2m

Figure 70.—Schematic drawing of the ground plan of a cave dwelling. At Intihuasi, Sierra de Comechingones, Province of Córdoba.

The presence of bedrock mortars is the best proof that these sites were occupied in aboriginal times.

A typical cave dwelling (pl. 152) was found in the valley of La Punilla, at Piedras Grandes, near the town of Huerta Grande. It is a large, eroded cavity in granite, and can shelter several people. The opening is well oriented, facing north. On the western and eastern sides, fissures have been closed with dry masonry. The most notable feature of the cave, which demonstrates its aboriginal occupation by natives, is nine bedrock mortars in the two large stone blocks forming the floor of the dwelling. Nearby there are 11 other mortars as well as smaller shelters which have also been occupied.

Another similar shelter is located at the southern tip of the Sierra de Comechingones (figs. 69, 70), near the city of Achiras. Although "stone houses" exist throughout the Sierras de Córdoba, they are especially numerous in this southern Sierra de Comechingones region. In the entire portion of the Sierra visited, the author found no shelter lacking evidence of former occupation.

Also near Achiras is the hill of Intihuasi, which has long been famous for its rock paintings. There are many typical cave dwellings on its slopes (Aparicio, 1936, figs. 1–5).

The chroniclers refer to curious underground dwellings in this region which are, obviously, not the natural or modified shelters. They are described by Cieza as follows: "Those who returned from the expedition say that they [the natives] dug out the ground until they obtained two walls on which they put a wooden frame and thatch-like huts." This information is confirmed by the "Relación" of Cabrera: "The houses are low and half of their height is underground. They enter them like cellars. They do this to protect themselves against the cold and because of the lack of wood in these regions." Father Pablo Cabrera (1932) found in a judiciary document of 1594 a confirmation of the above quoted passages. In the course of the document are such sentences as, "The old house or hole which was shown," or, "The site of an abandoned house, the hole of which is half a league away."

Archeological research has encountered no vestiges of such houses, and in Córdoba there is no tradition of them, but in San Luis such tradition still exists.

DRESS

Cieza gives the first information about *Comechingón* dress:

> In summer they wear tunics [camisetas] not very long and in winter long capes [mantas] of coarse wool. The women also are dressed in the same clothes.

Matienzo describes them briefly as "people dressed like the Diaguitas." The "Relación" of Cabrera is more explicit:

> Most of them are dressed with wool and some with well worked skins like the guadamecis of Spain. Most of them have rods of metal with heads like spoons

in their woolen headdresses which they wear for luxury's sake. [He adds] The camisetas which they wear are made of wool and woven with beads in a technique of small meshes of delicate work around the openings, the bottom edge, and the sleeve openings.

Sotelo Narváez confirms this information. Bárzana seems to contradict it, but, actually, the contradiction is more apparent then real. The various chroniclers' testimony is confirmed by the rock paintings and by the clay images, which almost always represent people clothed.

MANUFACTURES

Ceramics.—Pottery making was not well developed compared to other regions of Northwest Argentina. The ceramic material found archeologically is not very different from that which is still made in the region by primitive procedures.

Crude potsherds are abundant on the sites in the mountains of Córdoba and San Luis. An insignificant proportion of them have simple incised decorations or impressions of nets or textiles. The incised decoration consists of primitive combinations of lines and dots, elements which have been firmly executed with a blunt instrument. Geometric figures, left plain or filled with punctations, are the common designs. The various design combinations are simple, crudely executed, and limited in variety (pl. 149, *a–f*). No painted pottery has been found. There is very little evidence on vessel form, as no whole pieces are found.

Besides pottery, other ceramics include: Spindle whorls (pl. 149, *j*, *m*, *n*) pendants, figurines (pl. 149, *g–i*, *k*, *l*), and other ornaments and modeled objects. The highest art expression of these early inhabitants of Córdoba is represented by the small clay figures.

Textiles.—The technique of woolen fabrics is unknown, but it must have been similar to that of the neighbors of the *Comechingón*. The textile impressions on potsherds are the only direct evidence of weaving.

Stone weapons and tools.—Most of the artifacts found in the area are stone implements of polished or chipped stone. The first are the more abundant, and among them axes and similar tools predominate. Chipped implements are usually crude, being made of a poor grade of stone, but some are finely worked.

Axes.—Axes, with few exceptions, belong to the type with a groove, typical of Northwestern Argentina.

Bolas.—Bolas are very common archeologically. Whereas axes show links with the Andean cultures, bolas are evidence of influence from the Southern Hunters. Bolas from Córdoba and San Luis are, with few exceptions, spherical or subspherical, and most are ungrooved.

Mortars and metates.—Portable stone mortars are abundant, and their size varies. The metates of this region, known as "conanas," are equally plentiful. The latter are simple, flat slabs, with a mano made of any rock with a more or less plane surface. They were shaped by being rubbed together.

Bedrock mortars are the most common remains of the native culture and are found in great numbers in various parts of the Sierra de Córdoba and the Sierra de San Luis. They are cupuliform and are always excavated in the surface of an outcropping of rock. The mouth is generally circular, though some were unintentionally made elliptical. The diameter is variable. Of the 202 mortars examined by the author, the minimum diameter is 3 inches (7 cm.) and the maximum 12½ inches (32 cm.). The greatest depth is 15 inches (37 cm.). The difference in depth is a result of the usage, as shown by many mortars, both portable and in thin ledges of bedrock, in which the bottom has been worn through.

The question of grinding techniques, which has previously been discussed (Aparicio, 1931 a), is far from settled, for indigenous techniques that have never been recorded still survive in small isolated regions, especially in the Calchaquí Valleys.

The problem of the diffusion of mortars is of interest. Bedrock mortars occur in Chile and Northwestern Argentina, and almost identical ones are found in the Southwestern United States and California.

Arrow points.—Among chipped-stone objects, arrow points predominate (pl. 150, *bottom*). The author has found many on sites in Córdoba and San Luis. They are generally triangular or lanceolate, with a plain or notched haft, and lack a stem. A few small points are stemmed and barbed.

Miscellaneous objects.—Other stone artifacts include scrapers, knives, and drills, most of them crude and without definite shape. This is probably because most of them are made of quartz.

Bone weapons and tools.—Bone was used mainly for arrow points, which are almost as numerous as the stone ones. They are both stemmed and unstemmed in equal numbers. The latter are deeply notched (pl. 150, *top*). Bone was also used for awls and for a few ornaments.

Wood.—Wood was also utilized, but no worked wood specimens have been preserved.

Metals.—Metallurgy was probably unknown. The ornaments mentioned by Cabrera and Sotelo Narváez were probably imported. No metal object has been discovered in the region.

TRADE

On this subject there is little information. Archeological sites do not show imported articles, implying cultural isolation. The trade objects mentioned in documents came from the Spaniards in Santiago.

SOCIAL AND POLITICAL ORGANIZATION

Nothing is known about the family except for a sentence by Sotelo Narváez, as follows: "They do not set so much importance on children as in Perú."

We have some information on social organization. It is obvious that the province was divided into small groups under chiefs who did not recognize any central authority. In Cabrera's "Relación," it is said, "Each pueblo is only a parcialidad or kin group and each one is by itself." The best confirmation is to be found in a document of 1587 by Tristan de Tejada (*in* Cabrera, 1932).

> It is notorious that no village which has a cacique is the subject of another cacique or pueblo. These people are in such anarchy that in all the encomiendas which exist or are being established each pueblo and cacique is mentioned by itself even if there are only two Indians.

Some of these chieftainships, according to another judicial document of 1584 (Cabrera, 1932), were hereditary.

In the "Probanza" of Pedro González de Prado there is an interesting statement about the relationships of these people with the *Inca* Empire:

> The so-called Andes [Aconquija] are mountains which divide these kingdoms from the Province of the Río de la Plata which we discovered and which Huaynacapac, natural lord of these kingdoms, was unable to conquer.

A witness, Antón Griego, confirms the statement, "He knows that Huaynacapac, natural lord of these Kingdoms, could not subjugate the people beyond the so-called Andes." Lizárraga says,

> The Inca maintained them [the *Huarpe*] in subjection and some spoke the Peruvian language, generally used in Tucumán, but not in Córdoba where the power of the Inca did not reach.

WARFARE

Information about the wars of the *Comechingón* with other tribes are lacking, but we have data on their resistance against the Spaniards. The three chroniclers of the above-mentioned expedition praise their fierceness and their efficiency at war. El Palentino says that they did not have poisoned arrows and that they preferred to fight at night, "in squadrons," and "carried hidden fire." They were good archers and protected their necks with leather collars. "They painted their faces half black, half red."

The "Probanza" of González de Prado is a good document on *Comechingón* weapons, tactics, and the episodes of warfare with neighboring tribes. It states that during a 20-day period, the *Comechingón* attacked them 4 times and killed 20 horses. They attacked at night because "they continually fight at night with fire." A native detachment 500 men strong attacked them in "close formation and they carried bows, arrows, and spears." Antón Griego says that these bearded Indians had a squadron with a line of archers and other Indians who carried spears. Their prowess is attested by Juan Cerón, a cleric, who says that they shot Pedro González de Prado so full of arrows that he "looked like San Sebastian," and that they killed an armored horse with 5 arrows.

BURIAL

Burials were the direct type, without grave offerings. The corpse was buried in flexed position, lying on its side. According to some trustworthy information, bodies were sometimes interred vertically. In one grave, the author found two skeletons with the skulls oriented in opposite directions. Within a shelter used as a dwelling were human remains which, after burial, had been covered with large rocks; the severed head was buried a short distance away. Urn burial for children or adults is entirely lacking. No true cemeteries were found. Graves are isolated and entirely unmarked, and, therefore, are discovered only by chance. Never more than four or five skeletons were grouped together.

ESTHETIC AND RECREATIONAL ACTIVITIES

Art.—The few arts of this area, already mentioned under Manufactures (p. 681), are extremely poor and, surprisingly, do not compare with those of neighboring peoples, such as tribes of Santiago del Estero (this volume, p. 655) and of the western Sierras. The most notable of these is the modeled figurines, which, though archaic in style, have a certain grace. Ceramic decoration is almost too crude to be considered art. Pictographs and petroglyphs, however, attained such development as to merit special consideration.

Pictographs and Petroglyphs.—In the Sierras of the North and especially in the Cerro Colorado are some of the most beautiful pictographs, or rock paintings, of Argentina and perhaps of the continent (pl. 151, *bottom*). On the walls and roofs of the shelters and on every suitable rock, the natives have left paintings of extraordinary artistic and ethnographic value. These paintings were discovered in 1903 by the poet Leopoldo Lugones, but they were first systematically studied and published years later by Gardner (1931). Their variety and complexity make description difficult. The figures are painted in many colors, with red, white, and black predominating. As a whole, the rock paintings of Córdoba differ from those of the rest of the country. Only those which are geometrical—perhaps highly conventionalized—are similar to paintings in other areas. The local fauna—represented with realistic exactness and beautiful conventionalization—is specially noteworthy. The paintings also depict fights between natives and Europeans, and they have, therefore, a historical as well as an ethnographical value. Rock paintings of lesser importance are found in several other places of the Sierra de Córdoba and the Sierra de San Luis, but are not well known.

Petroglyphs are very scarce. Outes (1911) published a petroglyph, the "Roca pintada," and the author discovered another of a quite different style on the Yuspe River, near Cosquín, the "Piedra marcada de San Buena" (pl. 151, *top*). The Yuspe engravings are of rheas, guanacos, horses, footprints, human footprints, and serpents, some slightly undulating and others beautifully spiraled with the head carefully represented. Moreover, there are also a cross, a zoomorphic figure, and some signs impossible to interpret. This stone is interesting because it differs from Outes' "Roca pintada" and from the pictographs. The same designs, however, occur in the Northwest and in Patagonia. Those in Patagonia are most similar to "Piedra marcada de San Buena."

Dances.—Of dances, Bárzana (1885) says,

> The Indians of Córdoba were addicted to dancing and singing, and after they had walked the whole day they danced and sang in a chorus during the greater part of the night.

RELIGION

Our sources are silent on religion, but Cieza de León (1909) states that the Indians, answering questions about their religion, said that they worshiped the Sun and Moon, first, because of the light these celestial beings gave the world, and, second, because they could see all the advantages which they derived from them. Thanks to them the earth produces foods, and they are considered the makers of all human things. The Indians fought at night because the Moon was with them and aided them. They talked, Cieza said, with the devil and "through their pernicious sayings and illusions they make great sacrifices and sorcery. They revere and respect him [the devil] as in the other provinces of Indians." The authenticity of this text is doubtful. Sotelo Narváez is content to say, "These people have few rites." Father Diego de Torres in a Carta Anua of 1611 (Cartas Anuas . . . 1927–29) mentions "some idols which they took from some idolaters."

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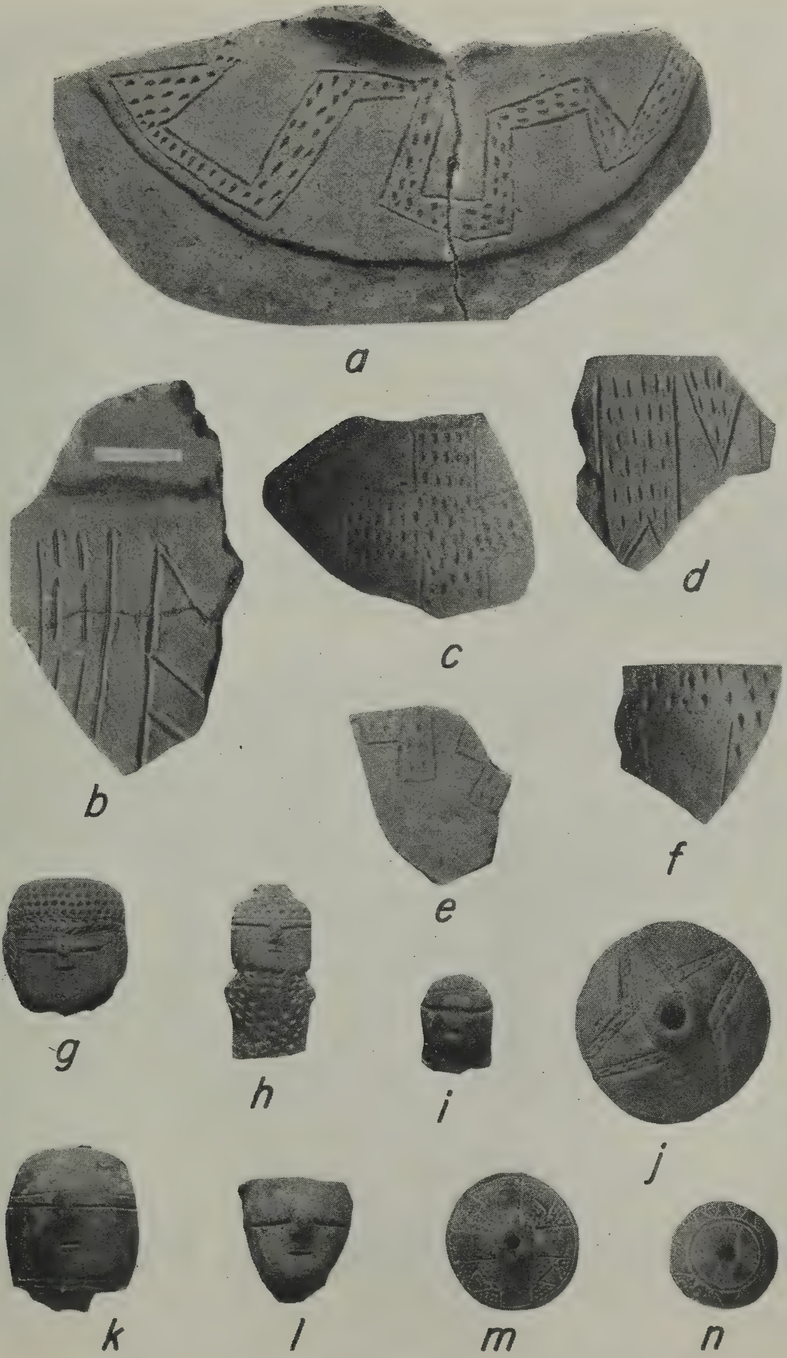

PLATE 149.—**Ceramics from the Sierras of Córdoba and San Luis.** *a–f*, Typical incised and puctated sherds; *g-i*, *k*, *l*, human heads of pottery from Rumipal, Tercero River; *j*, *m*, *n*, pottery spindle whorls, same provenience as heads. (Courtesy Francisco de Aparicio.)

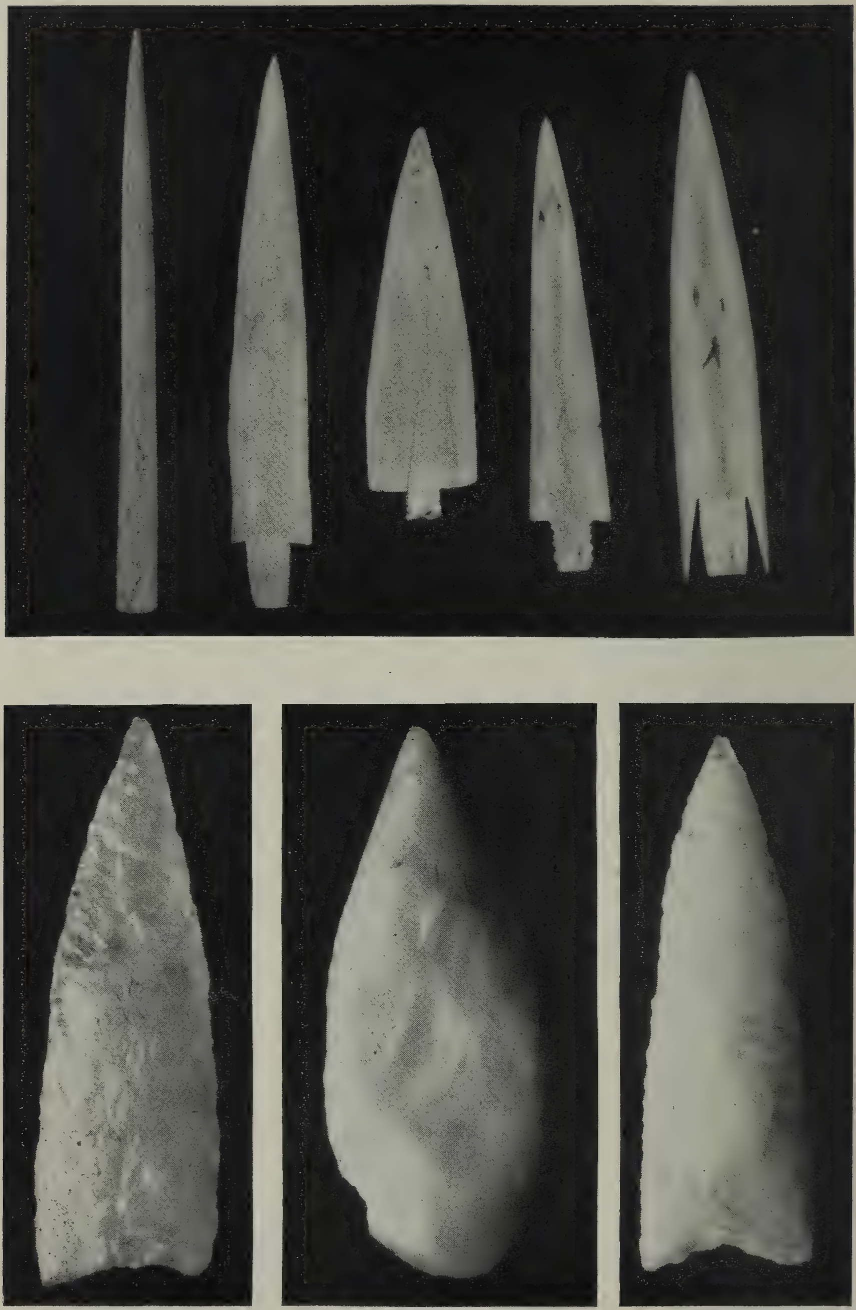

Plate 150.—**Projectile points from the Sierras of Córdoba and San Luis.** *Top:* Typical bone points. *Bottom:* Typical stone points. (After Aparicio, 1939, figs. 13 and 14.)

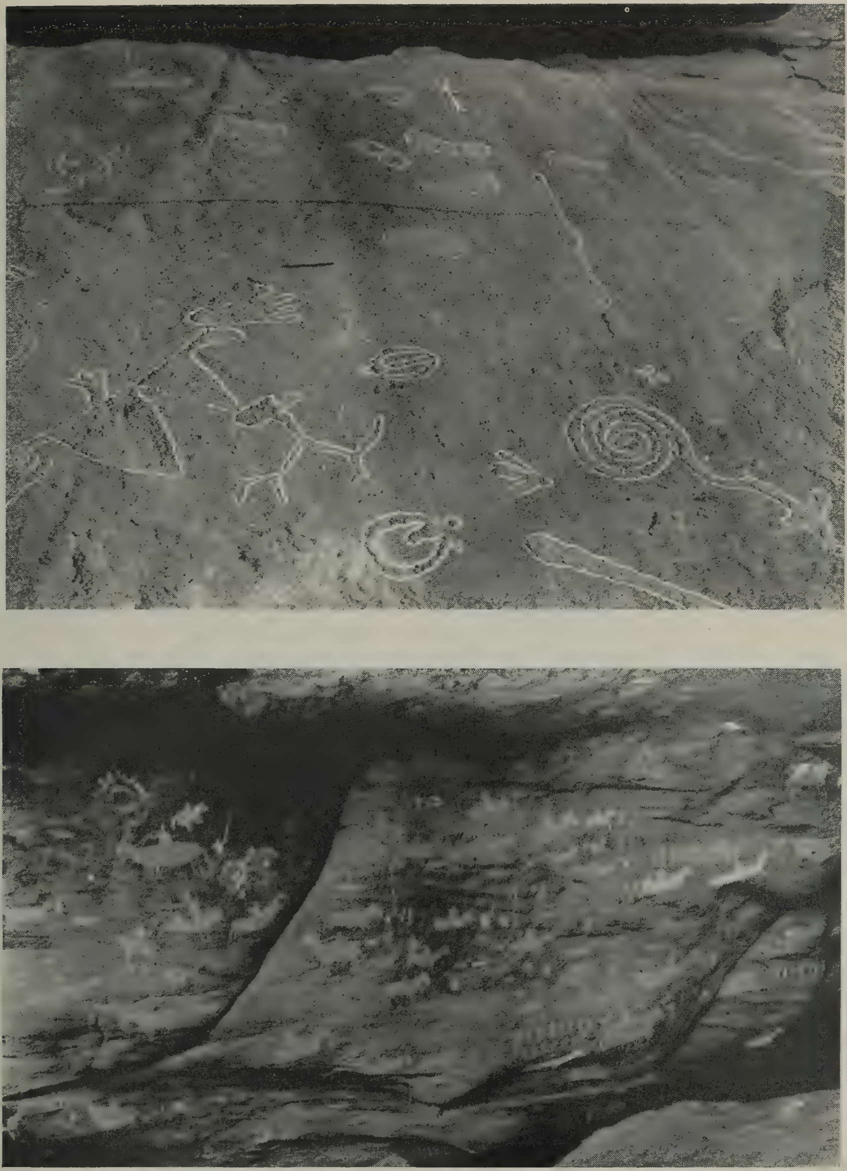

Plate 151.—**Córdoba petroglyphs and pictographs.** *Top:* San Buena, Yuspe River. (Courtesy Francisco de Aparicio.) *Bottom:* Some of the rock paintings of the Cerro Colorado. (After Aparicio, 1939, fig. 6.)

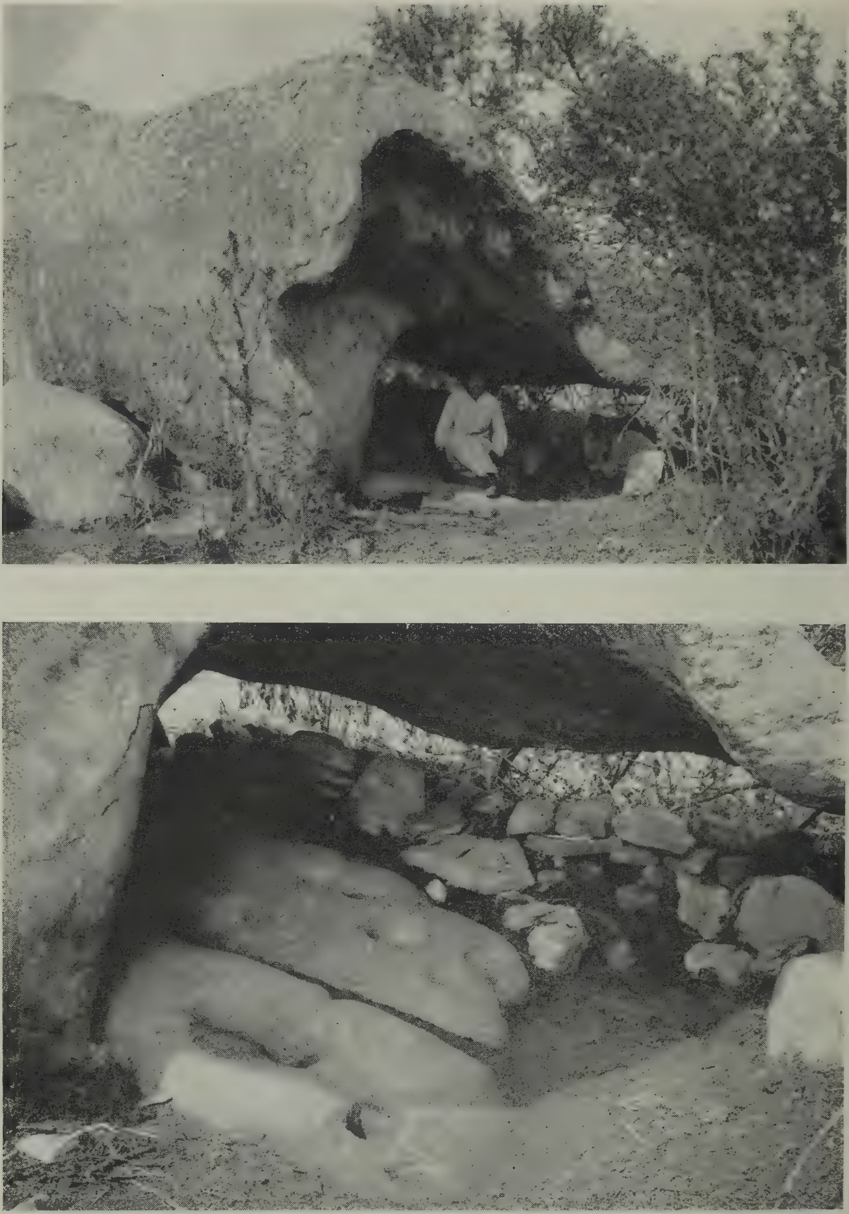

Plate 152.—**Rock dwelling in the Piedras Blancas, Punilla Valley, Córdoba.** *Top:* View from outside. *Bottom:* Interior view of dwelling. Mortars in the rocks in foreground with crude rock wall supplementing natural cave at back. (Courtesy Francisco de Aparicio.)

THE ARAUCANIANS

By John M. Cooper

NATURAL ENVIRONMENT[1]

Middle Chile, the earlier habitat of the *Araucanians*, extends from lat. 30° to 43° S. and falls into two divisions, northern Middle Chile, 30° to 37°, and southern Middle Chile, 37° to 43°, which correspond fairly closely to the accepted tribal division of the Chilean *Araucanians* into the *Picunche*, and the *Mapuche-Huilliche* (map 1, *No. 17*; map 5). To the east runs the Andean Cordillera, reaching an average altitude of about 15,000 to 20,000 feet (5,000 to 6,000 m.) through much of its length, and toward the ocean the coastal range, averaging about 1,000 feet (300 m.) in altitude with a maximum of around 7,000 feet (2,300 m.). Between the two ranges lies the great Central Valley, extending with few breaks the whole length of Middle Chile. There are many passes through the Andes. Those most used in Colonial days were the high-altitude Uspallata pass to Mendoza and the low-altitude one east of Villarica. Snowfall is unusual in the Central Valley, but is abundant in the Cordillera.

In northern Middle Chile, the *Picunche* country, north of the Bío-Bío River, precipitation is light, with a Mediterranean climate, of rains in the winter and drought in the summer. From the southern limits of the desert proper at Coquimbo to the Bío-Bío River, precipitation gradually increases. Vegetation is dry forest, of the chaparral type, with acacias and laurels typical.

In southern Middle Chile, the *Mapuche* and *Huilliche* country, precipitation is heavy, and occurs throughout the year. The dense temperate rain forest begins rather abruptly at the Bío-Bío and extends with only local breaks throughout the area, with a markedly humid climate. Typical trees are deciduous and evergreen beeches (*Notofagus obliqua* and *N. dombeyi*, respectively), and cypress (*Libo-*

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[1] Since certain *Araucanian* subtribal names, such as *Huilliche, Pehuenche*, etc., are so well established in anthropological usage that change of customary spelling would look strange, and since most of our sources give only imperfect information on the exact pronunciation of native *Araucanian* words, especially of the vowels, it has not proved feasible or advisable to adopt a uniform system of transcription throughout the present paper. The chief phonetic equivalents used herein are: *ch*, as Spanish *ch; hu* before *a, e*, and *i*, as English *w; qu* before *e* and *i*, as *k; c*, as *k; ll* and *ñ*, the *ly* and *ny* sounds respectively, as in Spanish; *η*, as *ng* in English *ring; ü*, close to labialized French *u*.

In scientific identifications of native plants and animals, the writer has in most cases followed Lenz (1904–10), Félix José de Augusta (1916), Gusinde (1936), and Moesbach (1936).

cedrus chilensis). Of particular cultural importance are the alerce (*Fitzroya patagonica*) and canelo (*Drimys winteri*).

The "*Pehuenche*" country comprises the higher slopes and intercordilleran valleys of the Andes, poorly adapted, on account of the low temperatures, to horticulture. Its most characteristic feature bearing upon culture is the Chilean pine (*Araucaria imbricata*), which covers great areas in the high intercordilleran valleys and on the upper western and eastern slopes of the Andes from about lat. 37°20′ to 40°20′ S.

The open country of the Argentine *Araucanians* is described more in detail in the paper on "The Southern Hunters" (q.v., Handbook, vol. 1, p. 127).

ARAUCANIAN TERRITORY

At the first coming of the Whites to Chile, *Araucanian*-speaking peoples occupied all the area west of the Andean uplands from the southern tip of the Island of Chiloé to, at least, the Río Choapa. The southern limit was Corcovado Gulf, immediately south whereof, in the Guaianecas Islands and the archipelago beyond, were the non-*Araucanian Chono* (Cooper, 1917, pp. 30–34). The northern limit is less sharply definable from our sources. To judge from Luis de Valdivia's explicit statement (1887, p. 6) and from local place names, the zone between the Choapa and Coquimbo was also at least partly *Araucanian*.

Whether the Indians who in the 16th and 17th centuries dwelt in or adjacent to the *Araucaria imbricata* forests of the higher intercordilleran valleys of the Andes between about lat. 37° and 40° S., whose staple plant food was *Araucaria* piñons, and who were called "*Puelche*" (Olaverria, 1852, p. 15) and later "*Pehuenche*" by contemporary Spanish writers, were then *Araucanian*-speaking, is not clear. Latcham assembled a certain amount of evidence, mostly nonlinguistic, in support of his view that they were not then *Araucanian*-speaking, but that they became *Araucanized* in language in the 18th century (Latcham, 1929–30, 63: 150–72). They were first explicitly recorded as *Araucanian*-speaking by Pietas in 1729 (1846, p. 499; cf. Molina, 1901, p. 263; 1878 b, pp. 492–93). The evidence from the earlier sources is more puzzling. Only two of the sources, the "Proceso criminal de 1658" and Rosales, give clues to the language spoken by the piñon-eating peoples called therein "*Pehuenche*" ("*Pegüenche*"). The piñon-eating "*Pehuenche*" described in the "Proceso criminal de 1658" were probably non-*Araucanian* speaking (1929, pp. 47, 136, 143–44, 152, 196; P. Cabrera, 1929, pp. 46–47). But Rosales, in his account of his peace mission in 1650 or 1653 through the upper cordilleran "*Pegüenche*" country south of lat. 38° S. to the "*Puelche*" country east of the "*Pegüenche*" country, is careful to state that the "*Puelche*" spoke a non-*Araucanian* tongue, whereas he makes no mention of the "*Pegüenche*" so doing. And, further, most at least of the "*Pegüenche*" personal and local names he records appear to be *Araucanian* (Rosales, 1877–78, 1: 198, 203; 3: 431–38).

The seeming conflict between the evidence from Rosales, Pietas, and Molina on the one hand and that from the "Proceso criminal de 1658" on the other is largely solved if we assume that the "*Pehuenche*" of the last source were not identical with the "*Pegüenche*" of the first three sources. Such an assumption of nonidentity is well within the probabilities in view of the very loose and variant use of this and other tribal denominations in our earlier as well as in our more recent sources. The assumption receives some positive confirmation from the fact that the "*Pegüenche*" chieftains' names mentioned by Rosales as of 1650–53 do not coincide with those recorded by the "Proceso criminal" as of 1658. Nor, seemingly, do the habitats assigned to the two groups coincide. Neither Rosales nor the "Proceso criminal de 1658" gives us very precise data thereupon. But by piecing together the scattered clues in each source, we can infer with reasonable probability that Rosales' *Pegüenche* lived in the high Cordillera flanking what is now central and southern Neuquén Territory from about lat. 38° S. to the neighborhood of Lake Nahuelhuapí (Rosales, 1877–78, 1: 176, 198, 211, 269, 468–69; 3: 431), and that the *Pehuenche* of the "Proceso criminal de 1658" occupied territory well north of them, about the latitude (ca. 36° 30′) of Cerro Payén, in the western part of what is now the southern extension of Mendoza Province (Proceso criminal de 1658, 1929, pp. 136, 138, 143, 147, 151), and perhaps somewhat east of the main Andean range, since one at least of the *Pehuenche* examined in 1658 testified that he was "natural de Payén" (ibid., 143).

In view of the foregoing evidence (about all we have which bears significantly on our problem, as the cultural and somatological evidence adduced by Latcham is hardly relevant) it would appear somewhat more probable than not that the pre-18th-century piñon-eating "*Pehuenche*" of the early Chilean chroniclers were *Araucanian*-speaking. But a definitive solution of the problem, if it is ever reached, will have to await much fuller study of the already published evidence—especially cautious analysis of recorded local and personal names by trained linguists thoroughly competent in the *Araucanian* and Pampean tongues—or the discovery of further pertinent archival documents.

As previously noted, the *Araucanians* did not begin to occupy in any large measure what is now Argentine territory until about the beginning of the 18th century. Thereafter, the main bodies of the migrants tended to keep more toward the Andean foothills and the western half or third of the Pampa from about the Limay to Mendoza Province—a point on which more details will be given in the following section on Tribal Names and Divisions.

At the present time, west of the Andes, the *Araucanian*-speaking Indians are massed mainly in southern Middle Chile, from about lat. 37° to 42° S., in the Provinces of Arauco, Bío-Bío, Malleco, Cautín, Valdivia, and Llanquihue, between the Bío-Bío River and the Canal of Chacao. There are a few scattered *Araucanian*-speaking Indians between the Bío-Bío and the Maule Rivers, but apparently none north of the Maule, and few or none, so far as the present writer can discover, on Chiloé, although north of the Bío-Bío River and on Chiloé somatological and cultural (Cavada, 1914) influences still survive in greater or lesser degree. East of the Andes, the surviving pure blood and Mestizo remnants of the earlier transcordilleran *Araucanian* migrants are found scattered in various sections of the Pampa, chiefly in the Territory of Neuquén, with other groups in the Province of Mendoza and the Territories of La Pampa, Río Negro, and Chubut.

TRIBAL NAMES AND DIVISIONS

The tribal appellative "*Araucano*" was first used by Ercilla in his "La Araucana" of 1569–89 (1910, p. xix), to denote the Indians of the locality of Arauco ("muddy water," from *Araucanian* ragh, raq, rau, "clay," + ko, co, "water"). Modern anthropology uses the term for all Indians speaking the *Araucanian* or *Mapuche* language, and it is this usage which we are following in the present paper. The *Araucanians* themselves do not use the term. They call themselves simply che, "people," or re che, "unmixed, pure, real" + "people." Modern Chilean *Araucanians* commonly use and prefer *Mapuche*, "People of the Land" (mapu, "land," + che).

The terms *Auca* (syn.: *Auka*, *Ouca*, *Aucano*, *Aucanian*), "rebel," from *Quechua* auka, "enemy, rebel," and *Promauca* (syn.: *Promaoca*, *Promanca*, *Promoca*, *Poromoca*, *Poromaca*, *Poromoaca*, *Paramoca*, *Pomoroaca*), "wild enemy," from *Quechua* purun, purum, "uncultivated field, wild," + auka, were names given by the *Inca* to the rebel or unconquered Indians south of the Maipó River to the Bío-Bío River, and were adopted and used in a similar limited sense by the Spanish in the 16th and 17th centuries. The anthropological use—as, e.g., by Brinton—of *Aucas* as a generic name for "*Araucanians*" has not been a happy one.

Present-day anthropological usage, well justified by our historical, linguistic, and cultural evidence, divides the *Araucanians* into the following main groups:

- West of Andes:
  - *Picunche.*
  - *Mapuche.*
  - *Huilliche* (and *Cunco*).
- Andean Highlands:
  - *Pehuenche.*
- East of the Andes:
  - Argentine *Araucanians.*

In the present paper "*Araucanian*" is used to include all these divisions, and these subdivisional names are used in their currently accepted anthropological connotations to be defined in the following paragraphs. The more important variant uses of the subdivisional names by the *Araucanians* themselves, by non-*Araucanians* Indians, and by earlier writers, will be noted in passing.

The *Picunche* (syn.: *Picones*), "North People," from *Araucanian* picu, pikun, pikum, "north," + che, "people," occupied the area from the Andes to the Pacific Coast and from Coquimbo or the Choapa to the Itata River or the Bío-Bío River. At different times in the past, the southern boundary of the Picu mapu, "north country," the territory of the *Picunche*, has been variously located from as far north as the Itata or the Bío-Bío to as far south as the Toltén (Havestadt, 1883, 2:680–81), depending largely on the relative geographical location of the users of the name and on the relative southern extension, at the time of use, of White conquest and rule. Some, too, of the *Araucanian*-speaking, and perhaps even some non-*Araucanian*, groups to the east of the Andes in the Tucumán and Mendoza regions of the western Pampa and eastern foothills were denominated *Picunche* in the middle and late 18th century. In modern times, the name has also been used for the *Araucanians* of Collipulli and the neighborhood in the Chilean Province of Malleco (Lenz, 1904–10, 2:583).

Latcham (1928 a, p. 128) subdivides the *Picunche* into three groups: those from (*a*) the Choapa to the Maipó River, (*b*) the Maipó to the Maule River, the earlier "*Promaucaes*," and (*c*) the Maule River to the Itata River.

The *Mapuche* (*Mapunche:* Felix Jose, 1910, p. 24; 1916, 1:131), "People of the Land," from *Araucanian* mapu, "land," + che, occupied and still largely occupy the area west of the Andes from the Itata or the Bío-Bío River to the Toltén River. The name is acceptable to present-day *Araucanians* themselves in this sense, although it can be and has been used with either a more inclusive meaning to signify all *Araucanians*, Chilean and Argentine, or with a less inclusive one to signify any local group, however small.

The *Huilliche* (*Huilli, Huiliche, Guiliche, Güilliche, Ghuylliche, Veliche, Beliche*), "South People," from *Araucanian* willi, "south," + che, occupied, and still partially occupy, the territory south of the Toltén, the Quepe, or the Calle Calle Rivers, to Corcovado Gulf, including Chiloé. At different times in the past the northern boundary of the *Huilli mapu* has been located at various points between the Itata and the Toltén River. (Cf. supra under "*Picunche.*") Sometimes, too, the *Cunco* and Chilotan *Araucanians* have been included in the *Huilliche*, sometimes differentiated therefrom. In one early account, Goicueta's of 1557–58, the canoe-using Indians (*Chono*) between Corcovado Gulf and Cape Tres Montes are called "*Huillis,*" while Falkner used *Pichi* ("Small-bodied") *Huilliche* for the *Araucanians* from Valdivia to the Sea of Chiloé, and *Vuta* ("Large-bodied") *Huilliche* for the Indians on both sides of the Cordillera from Chiloé to the Strait of Magellan (Cooper, 1917, pp. 30–32). (On use of "*Huilliche*" for Argentine *Araucanians,* cf. infra.)

The *Cunco* (syn.: *Junco;* in forms such as *Guinchi, Cunches,* and *Cunchi* (pl.) and *Kuncho,* as used by Molina, who followed Italian orthography, or as derived from him, *ch* = *k;* etymology uncertain) occupied the western third of half of the Chilean mainland from Valdivia or the Bueno to the Canal of Chacao, especially, according to Latcham (1928 a, p. 205), the Departments of Carelmapu and Osorno.

The *Chono, Poya,* and *Caucahue* of the older chroniclers and modern anthropologists were not *Araucanians.* Falkner's use of "*Chono*" as inclusive of the *Araucanian*-speaking Chilotan Indians was erroneous. The term *Huilliche Serrano* came in during the second third of the 18th century, according to Latcham (1929–30, 64:218), to denote groups, previously called *Puelche,* of the Cordillera. The term *Moluche* (syn.: *Muluche, Nguluche*), probably "Western People," from *Araucanian* gull, gulhue, "west," + che (not "Warrior People," Lenz, 1904–10, 2:509) first appears in our literature in 1774 as used by Falkner for the *Araucanians* both east and west of the Andes from the "confines of Perú" (or Coquimbo) south and including the non-*Araucanian Chono, Poya,* and *Caucahue* to the Strait of Magellan. *Moluche* was a name by which they were then known to the Argentine or "eastern" *Araucanians. Auca,* wherever used, refers to *Araucanians.*

The *Pehuenche* (*Pegüenche*), "People of the Pines," from *Araucanian* pehuén, pegüen, pewen, "Chilean pine (*Araucaria imbricata*)," occupied the high slopes and valleys of the main Andean Cordillera where their chief staple food, the Araucaria, grew, that is, from about lat. 37° 20′ to 40° 20′ S., and seemingly, they at different times or in different seasons of the year occupied or roamed over some of the territory outside of but adjacent to the Araucaria range. It is by no means clear whether the 17th-century "*Pehuenche*" of the Cordillera between lat. 37° and 40° S. were the ethnic forebears of the 18th- and 19th-century "*Pehuenche*" of the Cordillera between 34° and 37° described by Molina (1901, pp. 262–65) and others. (Cf. infra under Culture of the *Pehuenche.*) Some of the early Chilean writers, such as Ercilla (1910, p. xix) and Olaverria (1852, p. 15) refer to these cordilleran people as "*Puelche.*" From the middle 17th century on, the name *Pehuenche* has been used for various bodies of Indians, in most cases, but not in all, identifiable as *Araucanian*-speaking, of the high Cordillera, of the eastern slopes thereof, or of the adjacent

Pampa, from about lat. 34° to 40° S.; in the second half of the 18th century, for the non-*Araucanian* "*Serrano*" Indians of the Sierra del Volcán and the Sierra de la Ventana regions, in the eastern Pampa south of Buenos Aires, and south of these ranges to or toward the Río Negro (Sánchez Labrador, 1936, pp. 29–30—possibly an author's or printer's error for "*Puelche*"). Since the middle of the 18th century, the name *Pehuenche* has also been used for a branch or branches of the Argentine *Araucanians* with their centers in or near the eastern slopes of the Andes. (Falkner, 1935, p. 97; Sánchez Labrador, 1936, pp. 30–31; De la Cruz, 1836, p. 36; Cox, 1863, pp. 164–165; Tounens, 1863, p. 2.)

Many of these *Araucanian*-speaking "*Pehuenche*" of the Argentine Pampa may well have been descendants, in part at least, of the earlier 15th- to 17th-century piñon-eating *Pehuenche* of the high Cordillera, but the relationship cannot be confidently established from our present evidence.

The Argentine *Araucanians* or subdivisions of them have been called by a great many names, of which the more important are: *Moluche* (Falkner, 1935, p. 96; Sánchez Labrador, 1936, p. 30); *Vilimuluche* (Sánchez Labrador, ibid.); *Picunche* (Falkner, ibid.; Sánchez Labrador, 1936, p. 31; Musters, 1871, pp. 231, 234); *Huilliche*, *Pichi Huilliche* (Falkner, 1935, p. 99: *Araucanian*, pichi="small"); *Pehuenche*, *Pegüenche* (Falkner, 1935, p. 96; Sánchez Labrador, 1936, pp. 30–31; De la Cruz, 1836; Cox, 1863, p. 164); *Picun-pehuenche* and *Huilli-pehuenche* (Cox, ibid.); *Manzaneros*, *Hombres del Manzanar* (Sánchez Labrador, 1936, p. 31; Musters, 1871, p. 70; Milanesio, 1898, p. 38: Span., manzano="apple tree"); *Sanquelche* (Sánchez Labrador, 1936, p. 30), *Ranquelche*, *Ranqueles* (Mansilla, 1877), *Ranquelines* (D'Orbigny, 1835–47, 2:227: "People of the Reeds," from *Araucanian*, ranql, raŋkül (*r*=*s*, dialectic shift)="reed" (*Chusquea* sp. and/or *Paspalum* sp.)); *Puelche*, *Puelchu* (*Araucanian*, puel, "east," + che) =*Serrano* (Camaño, 1783, *in* Clark, 1937, pp. 114–115); *Mapuche* (Moreno, 1879); *Pampa* (Barbará, 1930); *Patagon* (Molina, 1878 b, p. 492; 1901, p. 265); *Araucanos* des Pampas (D'Orbigny, 1835–47, 2:225). Of the nine smaller groups listed as "*Puelche*" by Falkner, Lehmann-Nitsche (1922, p. 60) considered the following to have been *Araucanian*-speaking: *Taluhet*, *Leuvuche;* the following in part *Araucanian*-speaking: *Diuihet*, *Calillehet*, *Chulilaukünnu*.

Around the middle of the 18th century, when we get our first glimpse of the respective locations of these subdivisions, the main body of the Argentine *Araucanians* called *Moluche* (*Picunche*, *Pehuenche*, and *Huilliche*) by Falkner (1935, pp. 96–98), and *Muluche*, *Picunche*, *Pegüenche*, *Vilimuluche* and *Sanquelche* by Sánchez Labrador (1936, pp. 30–31) appears to have been massed around the eastern slopes of the Andes and the adjacent Pampa from about lat. 30° S., somewhat south of Mendoza City, to about lat. 43° S., a little south of Lake Nahuelhuapi. In 1806, De la Cruz (1836, p. 36) located the *Pegüenche* in the Andean upland and eastern slopes and adjacent Pampa between lat. 34° and 37° S., as Molina (1901, p. 262) had done earlier, and the *Guiliche* south of them. Poeppig's *Pehuenche* were around Antuco (1835–36, 1:381). Mansilla in 1870 (1877, 1:3,6; 2:275) more precisely ascribes the territory between lat. 35° and 37° S., and long. 63° and 66° E. to the *Ranquel*, between the Río Quinto and the Río Colorado, with their center at Leubucó.

Some of these locations are rather vaguely defined. Furthermore, it is by no means clear that the same subdivisional names as used for Chilean and Argentine subdivisions, or at different periods by different sources for the Argentine subdivisions themselves, refer to identical groups and historical descendants therefrom. For instance, we have no means of knowing for certain whether the groups called *Pegüenche* in the middle 18th century are descendants of the early 18th-century *Pehuenche* of Pietas, or of the middle 17th-century *Pehuenche* of Rosales and of the "Proceso criminal de 1658"; or whether the *Ranquel* of Mansilla are descendants of Sánchez Labrador's *Sanquelche*. Such subdivisional names, derived from cardinal directions or ecological phenomena, were very loosely and variably used by Indians and Whites, depending on the location or option of the users.

It seems more probable that the Argentine *Picunche* located by Falkner from about lat. 30° to 35° S. are not, in the main at least, descendants of the Chilean *Picunche*, as these latter appear to have been well absorbed and Hispanicized before the start of the major *Araucanian* invasion of the Argentine Pampa in the early 18th century. The survival beyond the 17th century in great numbers of the Chilean *Mapuche* and *Huilliche*, the severe pressure exerted by the Whites on the *Mapuche* and especially on the *Huilliche* in earlier Colonial days, and scattered historical clues on 17th-century Chilean *Huilliche* and *Pehuenche* raids or intrusions into the Argentine Pampa, all suggest, without however proving, that the bulk of the Argentine *Araucanians* stem from the Chilean *Mapuche* and *Huilliche*, especially the latter.

POPULATION

Estimates of *Araucanian* population at the time of first White contact vary from a half million to one and a half million. These estimates rest on very weak evidence, and it is impossible to say which of them is nearest to the truth. Everything points, however, to the conclusion that at that time the area between the Canal of Chacao and the Bío-Bío and Itata Rivers was very densely populated; the area north of the Itata, much less so. There are many indications that this dense population south of the Itata and Bío-Bío Rivers was at a very early period reduced greatly. Mariño de Lovera remarked (1865, p. 448) that after 50 years of warfare, where formerly the Indians had been counted in thousands, they were then (circa 1594) to be reckoned in fifties. Hard labor under the encomienda system in the fields and mines and towns also took its toll as did likewise, it would seem, disease (González de Nájera, 1889, p. 200) and social disorganization.

The Chilotans, who at first contact are estimated to have exceeded 50,000, had a little over two centuries later dwindled to 11,000 (Olivares, 1864, p. 61; 1874, p. 365); great numbers of them were in the early 17th century captured, taken away, and sold as slaves.

Estimates of present-day *Araucanian* numbers will depend a good deal upon what we understand by "*Araucanians*." The Chilean census of 1907 listed 101,118, that of 1920, 105,162, all between the Bío-Bío River and the Canal of Chacao. Brand (1941 a, p. 23) was informed that the Chilean Government recognized the existence of some 187,000 *Araucanians*. He was also told by an *Araucanian* leader, Martín Collió Huaiquillaf, that a population of 300,000 was claimed in 1941. "If we count as 'Indian' anyone who physically seems to be Indian, and all who linguistically or socially are considered Indian, then the estimate of 300,000 *Araucanians* probably is not too high" (Brand, 1941 a, p. 24; cf. 1941 c, p. 83). This estimate, and Brand's estimate of 200,000 Indians speaking *Araucanian* dialects, appear to be our best ones.

The *Araucanian*-speaking Indians in Argentine territory are variously estimated to number from a few hundred to 3,000 or 4,000 (Brand, 1941 a, p. 24). In Mansilla's time, 1870, the *Ranquel* alone were estimated by him to number 8,000 to 10,000 (1877, 2:274). Fasulo, in 1925, estimated the total Indian population of the Pampa and Patagonia, including the *Araucanian* elements, at about 7,000 (1925, p. 161).

From the middle to the end of the last century great reductions in the native population from the Bío-Bío River to the Canal of Chacao took place as a result of wars and feuds, of smallpox and cholera epidemics, and, apparently, of alcoholism. Since the beginning of the present century, however, the *Araucanian* population of Chile appears to have been steadily increasing.

LANGUAGE

Araucanian is an independent linguistic family. Each region and tribal subdivision has its dialectic differences, but these are mostly relatively minor ones, consisting of phonetic shifts (such as, e. g., *r*=*s*=*d*, *n*=*ñ*, *t*=*tr*=*ch*), different meanings for the same word, different words for same meaning, slight differences in formation of plural of substantives, etc. The dialects are mutually intelligible, but in some cases only with considerable or very great difficulty

(Félix José, 1910, pp. xi–xii; 1916, 1:vi). Speakers of a given dialect are apt to pride themselves on using better *Araucanian* than speakers of another, and make fun of the latter's manner of speech. In all dialects there is a more elegant mode of speaking, resorted to especially in meetings of leaders. *Araucanian* has incorporated a considerable number of loan words from *Quechua*.

HISTORY

The recorded history of the *Araucanians* begins with the first *Inca* invasion of their territory under Tupac Yupanqui, who reigned probably circa A. D. 1448–82. The *Inca* frontier was finally fixed at the Río Maule. By the time of the arrival of the Spaniards in *Araucanian* Chile, *Inca* governors had been appointed in the provinces as far south as the Río Maipó, tribute was being exacted, and outpost forts had been erected between the Río Cachapoal and the Río Maule. But the influence of *Inca* culture upon *Araucanian* in this northern zone does not appear to have been very profound.

First contact between the *Araucanians* and the Spaniards took place in 1536 when Diego de Almagro with his main army penetrated to Aconcagua, some of his men getting as far south as the Río Maule. But the permanent occupation of *Araucanian* territory began with Pedro de Valdivia, who, setting out from Cuzco in early 1540, reached the valley of Mapocho early in 1541, and founded the city of Santiago on February 12 of the same year. During the following 12 years, to 1553, he established footholds, founding cities and building forts, as far south as Villarica and Valdivia. In 1558, García Hurtado de Mendoza extended the invasion to Chiloé. There followed four decades of bitter warfare between the Spaniards and the *Araucanians*, which came to a head with the death in 1598 of the governor, Martín García de Loyola, and the almost total destruction of the Spanish settlements in *Araucanian* territory south of the Bío-Bío River.

The struggle continued intermittently through the 17th century, giving place in the 18th, with the inauguration of less oppressive policies, to relatively peaceful relations, broken chiefly by the uprisings of 1723, 1740, and 1766. The last stage of the three-and-a-half-century-long struggle was ushered in around the middle of the 19th century, with the impulse then given to foreign immigration into Chile and to White infiltration into the *Araucanian* frontier region. The last uprising of the *Araucanians* began in 1880, and ended with their definitive pacification in 1882–83.

In general, throughout this long period, from 1541 to 1883, relatively little opposition from the *Araucanians* was experienced north of the Río Maule and south of the Río Imperial by the Spaniards; most of the struggle occurred in the central *Araucanian* territory between these two rivers, and especially between the Bío-Bío and the Imperial Rivers.

During the first half of the period, especially during the 16th century, Spanish cultural influences upon the *Araucanians* operated along many lines. The encomienda system, first introduced in Valdivia's time, and then and thereafter carried out on a large scale, brought great numbers of *Araucanians* as workers to Spanish farms, ranches, mines, and homes in Chile, for longer or shorter periods. A great many of the Spanish soldiers and settlers married *Araucanian* women. Many of the Mestizo offspring of such marriages, reared in White surroundings, on coming of age joined the *Araucanian* fighting forces. Many runaways—Spanish, Mestizo, Negro, and mulatto—sought refuge among the *Araucanians*. Captive *Araucanians*, who after a while among their captors were in considerable number freed on various occasions, returned to their people. Many Spaniards—men, women, and children—taken captive in wars and raids remained by force or by choice among their *Araucanian* captors. Many *Araucanians*, taken into the Spanish fighting ranks and trained therein, deserted to their countrymen. Through martial encounter, the *Araucanians* learned much of European military tactics, offensive and defensive weapons, and horsemanship, and used their new knowledge and new weapons with deadly effect.

Other White influences on the *Araucanians* came through the missionaries, some of whom accompanied Almagro and Valdivia. Most of the earlier missionary work among the main body of the *Araucanians* from the Bío-Bío River to the Canal of Chacao was done by the Jesuits, from 1593 to their expulsion in 1767–68, and by the Franciscans, especially after the middle of the 18th century to the middle of the 19th. Since 1848, the Capuchins have taken over much of the task. Since the 1890's, Protestant missionaries of several denominations, mostly from England and North America, have been active. The Salesians of Don Bosco have worked since 1879 among the Argentine *Araucanians*.

In spite of all these influences, secular and religious, *Araucanian* culture in the central zone, from the Bío-Bío River to the Río Imperial and even to the Gulf of Reloncavi, remained fairly intact until well toward the end of the 19th century, and much remains even today. The native culture north of the Bío-Bío and the Maule Rivers and on the Island of Chiloé early suffered more profound disintegration and survives only fragmentarily among the Mestizo population of these zones.

In sketching the history of the main body of the *Araucanians*, we have purposely omitted mention of the *Araucanian* diaspora across the Andean Cordillera to the Argentine Pampa. This migration may be divided into two phases: a preliminary one up to about the end of the 17th century, and the major one beginning with the dawn of the 18th century.

As early as Valdivia's time, some of the "*Pegüenche*" of the upper main Andean Cordillera and of the "*Puelche*" to the east of them were brought to the Villarica region under the encomienda system (Rosales, 1877–78, 1:469). These "*Puelche*" on returning to their own country must have brought back some *Araucanian* cultural influences, some knowledge of the *Araucanian* tongue, and, not unlikely, an occasional *Araucanian* wife. Sporadic raiding by upland "*Pegüenche*" and by lowland *Araucanians* down and across the Andes into the eastern Andean foothills and into the Pampa beyond was occurring as early at least as the middle of the 17th century. (Rosales, 1877–78, 3:431; P. Cabrera, 1929, pp. 52–53; cf. Proceso criminal de 1658, 1929, p. 123.) Furthermore, our scanty published records imply or suggest the probability that individual *Araucanians* or small bands of *Araucanian* refugees or wanderers had meanwhile come down from the upper cordilleran valleys or had crossed from the west of the Andean slopes, and had taken up life, temporarily at least, on the western fringe of the Pampa, more or less associated with the earlier non-*Araucanian* natives. (Cf. Latcham, 1930, 64:222; 65:235.) As early as 1673–80 *Araucanians* were actively trading with non-*Araucanian* peoples of the Pampa (P. Cabrera, 1934, 1:105,108).

The major phase of the *Araucanian* diaspora into the Pampa began, however, only at the end of the 17th or beginning of the 18th century (Latcham, 1929–30). In 1707, *Araucanians* were associating or in alliance with non-*Araucanians* on the Río Quinto around what is now Mercedes, in the Province of San Luis (P. Cabrera, 1927, pp. 54–55). A little later, 1709–15, they were raiding almost to the gates of Buenos Aires (Canals Frau, 1941, pp. 233–234).

By the middle of the 18th century *Araucanians* were occupying the eastern slopes of the Andes and the adjacent Pampa, and were making excursions to capture wild horses as far as the Volcán range in the southern part of what is now Buenos Aires Province, where Cardiel and Falkner found them in 1746 (Cardiel, *in* Fúrlong C., 1938, p. 141). From this time on until the campaigns of Roca and Villegas (1879–83), they played a premier role in aboriginal life on the Pampa north of the Río Negro, and greatly modified the culture of the *Tehuelche* south of the same river.

CULTURE

By far the greatest bulk of our information on *Araucanian* culture concerns the *Mapuche* and the mainland *Huilliche* (including the *Cunco*). Our information on the culture of the Chilotan and Argentine *Araucanians* is much less extensive; on that of the *Picunche* and early *Pehuenche*, relatively very meager. To judge from what we do know of the Chilotan culture, it approximated fairly closely that of the *Huilliche*. The *Picunche* and Argentine *Araucanian* cultures appear appreciably modified by non-*Araucanian* influences. The early *Pehuenche* culture differed sharply in some of its technological aspects from the *Mapuche-Huilliche*. In view of the foregoing facts, it seems wiser, for the sake of clarity, to devote separate sections to the various *Araucanian* subdivisions, covering first and mainly the *Mapuche-Huilliche* culture, and appending shorter separate treatments of the *Picunche*, Argentine *Araucanian*, and *Pehuenche* cultures.

CULTURE OF THE MAPUCHE-HUILLICHE

SOURCES

In the following list of our more important sources, mostly firsthand, on the culture of the *Mapuche-Huilliche*, the numbers between parentheses denote dates of editions used in the present paper; those between brackets, the dates of first publication or of completion of manuscript; those unenclosed, the dates of observation by the respective authors. For convenience, the sources are listed chronologically.

Sixteenth century: Goicueta (1852), [1558], 1558; Ercilla (1910), [1569–89], ca. 1557–60; Góngora Marmolejo (1862), [1575], 1549–75; Mariño de Lovera (1865), [ca. 1594], 1551–94; Olaverria (1852), [1594]; Oña (1917), [1596].

Seventeenth century: L. de Valdivia (1887), [1606], 1593–1622; González de Nájera (1889), [1614], 1601–7; Bascuñan (1863), [1673], 1629; Brouwer (1892), [1646], 1643; Barlaeus (1647); Marcgrav (1648); Ovalle (1888), [1646]; Rosales (1877–78), [1674–], ca. 1629–82.

Eighteenth century: Frézier (1716); Pietas (1846), [1729], 1729; Olivares (1864), [1758–67], (1874), [1736], ca. 1700–67; Febrés (1882), [1765]; Havestadt (1883), [1777], 1748–67; Molina (1878 a), [1776], (1878 b), [1782], (1901), [1787], before 1767; Gómez de Vidaurre (1889), [1789], before 1767; Carvallo i Goyeneche (1876), [1796], ca. 1765–92.

Nineteenth century to 1883: Domeyko (1845), 1845; Smith (1855), 1853; Ruíz Aldea (1902), [1856], ca. 1856; Medina (1882).

1883 to present: Lenz (1895–97, 1896, 1904–10), ca. 1890–1938; Guevara Silva (1898, 1904, 1908, 1911, 1913, 1929), ca. 1898–1935; Latcham (1909, 1915 b, 1922 a, 1922 b, 1928 a, 1928 b, 1929–30, 1936 d), 1888–90, 1892–95; Robles Rodríguez (1942), [1906–14], ca, 1904– ; Félix José de Augusta (1907, 1910, 1916), ca. 1896– ; Bullock (1911), ca. 1907– ; Manquilef (1911, 1914), 1887– ; Gusinde (1916–17, 1922, 1936); Looser (1927, 1934); Claude Joseph (1928 a, 1928 b, 1931, 1933–34), ca. 1928– ; Moesbach (1936), [1930], 1920– ; Lothrop (1930, 1932), 1929–30; McClafferty (1932); Housse (1939), ca. 1930– ; Brand (1941 a, 1941 b, 1941 c); Métraux (1942 b).

SUBSISTENCE ACTIVITIES

The diet of the *Mapuche* and *Huilliche* was and is predominantly vegetarian. (González de Nájera, 1889, p. 41; Ovalle, 1888, 12:157; Molina, 1901, p. 193; Domeyko, 1845, p. 58; Housse, 1939, p. 166.) Relatively little meat was eaten, outside of feasts. Fish and other sea food formed a considerable element in the diet in the Coastal area. Most of the food supply was derived from cultivated plants. At the time of the coming of the Spaniards, all the *Araucanians* (except perhaps the *Pehuenche*: cf. infra) from the Choapa to Chiloé inclusive were sedentary farmers. That *Araucanian* agriculture as such antedated the *Inca* invasion of the second half of the 15th century is reasonably certain, since south of the Maule River *Inca* influence could hardly have given rise in so short a time to such a high development of agriculture as the first Spaniards found as far south as Chiloé.

Agriculture.—The following food plants were being cultivated by the *Mapuche-Huilliche* at the time of the first arrival of the Spaniards: (1) Maize, wa, *Zea mays;* 8 or 9 "varieties," according to Molina (1878 b, p. 375); cultivated on Chiloé as well as mainland. (2) White potato, poñü, puñe, *Solanum tuberosum;* over 30 "varieties," according to Molina (1878 b, p. 377; cf. Bukasov, 1933, p. 163, many varieties, especially on Chiloé); more than a hundred native names of "varieties" grown on Chiloé (Lenz, 1904–10, 2:559–61). (3) Kidney bean, deŋüll, degüll, *Phaseolus vulgaris;* 13 or 14 kinds, according to Molina (ibid., p. 376). (4) Squash, peŋka, wada, *Cucurbita maxima* (and *C. pepo*?) (5) Madi, *Madia sativa;* a seed-crop; an oil derived from seeds. (6) Chili pepper, trapi, thapi, *Capsicum annuum;* many varieties cultivated. (7) Quinoa, dawe, *Chenopodium quinoa;* a seed-crop; leaves also eaten (Molina, 1878 b, p. 376). (8) Oca, *Oxalis* sp.; root-crop cultivated earlier in Chiloé and Llanquihue; two varieties cultivated, according to Latcham (1915 b, pp. 149, 154). (9) Magu, maŋo, mango, *Bromus mango;* a seed-crop resembling our rye; bread made from grain. (10) Teca, tuca, thuca, not identified botanically; superficially resembling our barley; bread made of grain. (11) Peanut, maní (from *Arawak;* no native *Araucanian* name), *Arachis hypogaea;* thought by Lenz (1904–10, 2:475) to have been introduced by the *Inca;* by Latcham (1936, p. 192), in post-Contact times. (12) Strawberry, kelleñ, llaweñ, *Fragaria chiloensis;* both cultivated and wild used. (13) Huequen, hueguen, not identified botanically; a seed-crop, superficially resembling our barley.

Of the foregoing, maize was the most important food staple among the *Mapuche*, but among the mainland *Huilliche* potatoes were apparently of near equal importance with maize, and among the Chilotans of much greater importance. This relative importance seems to have persisted down to the present. Potatoes were recently the chief food of the poorer Indians in the Río Imperial area (Coña, in Moesbach, 1936, p. 99).

Teca, huequen, and oca are no longer cultivated; the cultivation of teca had been abandoned as early as Molina's time in the middle 18th century. The last specimen of magu was collected in 1837 in south Chiloé. Quinoa was reported under cultivation in Chiloé as late as 1875; on the mainland well into the present century in small quantities (Bullock, 1911, p. 28).

There is no report of manioc or tomatoes being cultivated by any of the *Araucanians.* The sweet potato was cultivated a little in the northern *Picunche* region, from Quillota north, but not by any of the *Mapuche-Huilliche,* so far as our records go.

Cultivation in open glades or with clearing through burning (Bullock, 1911, pp. 32–33) was the prevalent system. Generally, land was left fallow 1 to 3 or more years after one season's planting (Bullock, 1911, pp. 31–32; Latcham, 1936, pp. 292–93). Garden plots were sometimes fenced (Goicueta, 1852, p. 93), more often unfenced. Beans were often planted in the same field with maize, the maize stalks serving as bean poles. Irrigation was used north of the Río Rapel, but there is no documentary or archeological evidence of its use south thereof (Latcham, 1928 a, p. 139), where rainfall was greater and more evenly distributed the year round. No terracing was done south of the Choapa (Latcham, 1928 a, p. 135). Manuring was apparently not practiced.

The chief gardening implements used to break ground and to loosen and lift the clods were: an oar- or shovel-shaped implement of wood; a wooden three-pronged or tridentlike "pitchfork," sometimes with a perforated stone at the upper end of the handle to weight it (Bascuñan, 1863, p. 192); a pole (used in pairs in Chiloé) pointed at one end and rounded at the other, the worker leaning his body weight at chest or stomach on the rounded end. For making holes to sow maize, beans, and potatoes and for digging out potatoes, a pointed wooden implement served as dibble and digging stick.

By far the greater part of the gardening labor fell to the women. They did the sowing and weeding. The more strenuous work involved in first breaking ground was done by the men.

Planting and harvesting were done on the communal or mingaco system, at least for maize. A man who wished to break ground and plant maize, invited the members of his community or parcialidad, men and women, to come with their implements, on a given day. The men would break the ground, the women following behind them, making holes with their dibbles, putting three or four kernels of maize in each hole, and treading down the earth over the hole. The planting over, all repaired to the man's house for an abundant meal with plenty of chicha (Moesbach, 1936, pp. 138–43). A similar procedure—invitation, communal labor, food and drink—was followed in harvesting and threshing wheat, and seemingly in other harvesting. The threshing of the wheat was done by men and women trampling the ears in a quasi-dance and at the same time singing to the music of trumpet, flutes, and drum. In more recent time threshing with use of horses came in.

Wild plant foods.—Of the noncultivated plant foods, the most important was piñons, the seeds of the Chilean pine (*Araucaria imbricata*) which grows in the Nahuelbuta coastal range as well as in the main Andean Cordillera. The natives came from considerable distances to gather the piñons in season. The number of distinct species of wild plants exploited, a good many of them intensively, as food sources was very large, totaling probably a good 75 to 100. One *Mapuche* alone, Coña, lists nearly 50 (Moesbach, 1936, pp. 30–31, 87–106). These included: Roots, and tubers—liuto (*Alstroemeria ligtu*), láwü (*Sisyrinchium* sp.), huanqui (*Dioscorea* sp.), gadu (*Conanthera bifolia*), and others; rhizomes of a fern, añpe (*Alsophila quadripinnata*); fruits and berries—myrtle (*Myrtus ugni*, *M. luna*, and others), "barberry" (*Berberis darwinii*, *B. congestifolia*, and others), boldo (*Boldoa fragrans* or *Peumus boldus*), peumo (*Cryptocarya rubra*), maqui (*Aristotelia maqui*), kopiu (*Lapageria rosea*), kowüll (*Lardizabala biternata*), doka (*Mesembryanthemum chilense*), mulul (*Ribes glandulosum*), nüyu (*Greigia sphacelata*), mulluen (*Empetrum rubrum*), apples (feral: post-Columbian, of course), and others; "hazelnuts" (*Guevina avellana*); seeds—llenque (*Podocarpus andina*), and lanco, lanko (*Bromus stamineus*, or *B. unioloides*); ŋalka, petioles of paŋke (*Gunnera scabra* or *G. chilensis*); leaves and greens—graciola (*Gratiola peruviana*), placa (*Mimulus luteus*) (*in* Moesbach, 1936, p. 100, leaves eaten as Europeans eat salad); many species of mushrooms; algae (seaweeds)—*Durvillaea utilis* (giant kelp), *Ulva lactuca* (sea-lettuce), *U. latissima*. Coña (*in* Moesbach, 1936, p. 30) lists as scarcity foods resorted to after the crop-foods were exhausted, in addition to ŋalka and añpe above-mentioned, the following, some of which are of Old World origin, but without giving details: Yuyo (*Brassica campestris*), yerba mora (*Solanum nigrum*), yerba buena (*Mentha pulegium*, *M. viridis*), cardo, troltro (apparently *Silybum marianum*, *Cynara carduncului*s).

In view of the great number and variety of cultivated and wild plant foods used by the *Araucanians* in the past, their plant dietary probably provided them with an adequate supply of the essential mineral and vitamin nutrients. The chief lack, from our point of view, is in green-leaf vegetables. As regards quantity, it would seem from our sources that the *Araucanians* usually enjoyed food sufficiency, if not abundance: there were seasons of relative scarcity, but there is little indication of recurrent or even occasional famines proper.

Hunting.—Hunting and trapping seem to have played a very minor role in *Mapuche-Huilliche* economy, to judge from rare statements such as those of Molina (1901, p. 124) and Coña (*in* Moesbach, 1936, p. 36), and from the scant attention given to the subject in our many earlier extensive first-hand accounts of *Araucanian* culture. Four-footed game appears to have been relatively scarce in the southern

Middle Chile forests, and, owing to the density of the undergrowth, not easily pursued.

The chief large animals hunted for food were the guanaco (*Lama guanicoe*), the huemul or guemal (*Hippocamelus bisulcus*), and the pudu (*Pudu pudu*). Many kinds of birds were taken, such as the tinamou (*Nothoprocta perdicaria*), the bandurria (*Theristicus melanopis*), parrots, doves, ducks, geese, swans, and others.

The puma (*Felis concolor*) was hunted with dogs; when the animal took to the trees, it was shot with arrows; and small dogs were also used in hunting partridges (González de Nájera, 1889, pp. 32, 34). The ordinary weapons employed in hunting were the bow and arrow (cf. infra under Warfare for description) and the sling. Later, in the 17th century, the two-balled bolas was introduced as a hunting weapon. Its use is first recorded in Rosales; the bolas was apparently absent earlier (McClafferty, 1932, pp. 43–44).

Snares (huachi, wachi) of several kinds were employed for trapping birds, but no details on construction are given in the early literature. Coña describes a multiple immobile or tether snare (European?): slip nooses of horse-tail hair were suspended from a horizontal line which was stretched between two posts embedded in the ground (Moesbach, 1936, pp. 36–37). Clog-snares, spring-pole and tossing-pole snares, pole- and perch-snares, deadfalls, pitfalls, and trapping nets are not mentioned in our sources, so far as the present writer can discover, and were apparently lacking.

Domesticated animals.—The domesticated animals kept by the *Mapuche-Huilliche* were the dog and the llama. The guinea pig was common in Chile (Ovalle, 1888, 12:91; Olivares, 1864, p. 31; Molina, 1878 b, pp. 474–75; Lenz, 1904–10, 1:220), but whether among the *Mapuche-Huilliche* in particular is not clear. Neither bees nor alpacas were kept. Tamed guanacos were common in the south of the area.

Two kinds of dog are recorded: a small short-legged one, with long hair, the kiltho; and a medium-sized longer-legged one with shorter hair, the thegua (Latcham, 1922 a, pp. 49–63). The dog was used in hunting.

The llama (chilihueque, rehueque, *Lama glama*) was reported from the earliest days of the Conquest as far south as the Ancud region where the ordinary Indian possessed 4 to 8 head and the caciques 12 to 20 (Goicueta, 1852, p. 93). With the introduction of mules and sheep, native llama breeding declined. Some llamas were still kept toward the end of the 18th century among the *Huilliche* (Ascasubi, 1846, p. 350), but are now no longer kept. The llama was bred chiefly for its wool and as a pack animal. It also served a socioeconomic function in the bride-price, and a religious one in sacrifices. Its meat was highly relished, but was not eaten except at important social or religious feasts.

The horse was adopted very shortly after the middle of the 16th century. Some horses were stolen from Pedro de Valdivia; 10 others were gotten as spoils of war at the defeat of Alvarado in 1555. Lautaro was seen on horseback in 1556. By 1562, the more general use of horses was under way. Thefts of horses thereafter were common. By the beginning of the 17th century, the *Mapuche* were making much use of cavalry in warfare, although many were as yet not such expert riders, and many were thrown from their mounts in actual fighting. Saddles were earlier made of light wood, saddle cushions of wool, stirrups and spurs of wood, bits of wood or whalebone, and reins and headstalls of hide or hemp (González de Nájera, 1889, pp. 114–15). As time went on, the *Mapuche-Huilliche* became accomplished and habitual horsemen, as they are today (McClafferty, 1932, pp. 44–49). The triangular great-toe stirrup (fig. 71) of cane was also used (Smith, 1855, p. 199). The lasso, used with great dexterity by the modern *Araucanian,* was probably introduced and spread

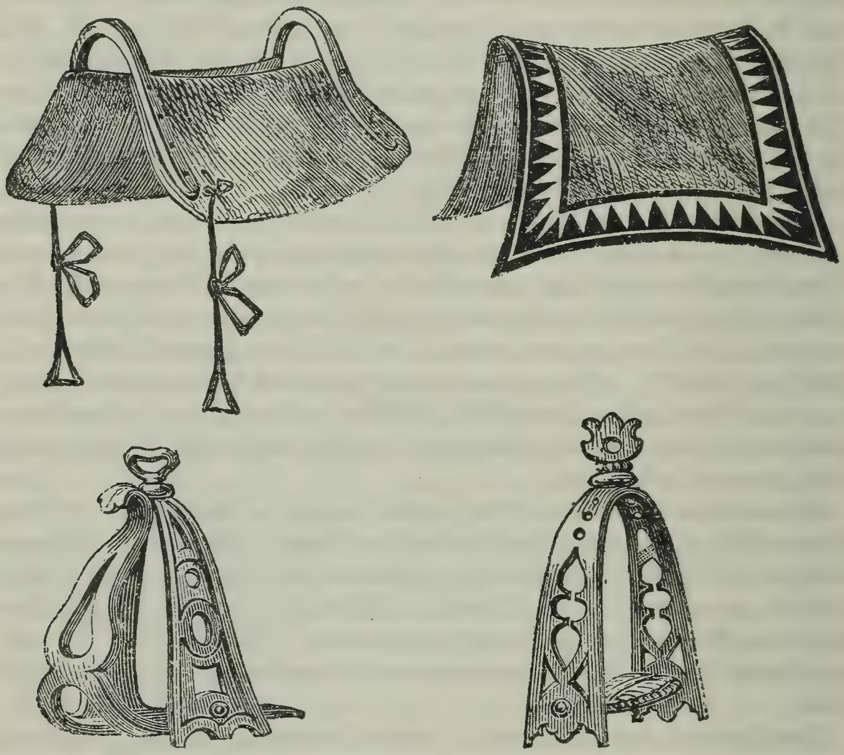


FIGURE 71.—A *Mapuche* saddletree, saddlecloth, and stirrups. (After Smith, 1855, p. 200.)

with the horse complex; it more probably was not part of pre-Hispanic *Mapuche-Huilliche* culture (McClafferty, 1932, p. 44).

Horned cattle, sheep, pigs, and chickens were taken over very early, beginning in the 16th century. The use of the Iberian hamstringer for cattle, a long pole with a crescent-shaped blade on its distal end, was reported by Molina (1878 b, p. 487) for the second third of the 18th century.

Fishing.—Fish and shellfish were important elements in the diet of the mainland *Mapuche-Huilliche* living on or near the Coast, while among the Chilotans they, with potatoes, constituted most of the food supply. Many kind of fish were taken, such as mullets (*Mugil* sp.), flatfish (*Paralichthys* sp.), porgies (*Sparus* sp.), silversides (*Austromenidia regia*), etc. The chief shellfish eaten were: Sea urchins (*Strongylocentrotus* sp.), crustaceans (*Aegla* sp. and *Parastacus* sp., and probably also marine crabs of several species), and bivalves (*Mytilus* sp., *Amphidesma* sp., *Tellina* sp., Unionids, and others). Ascidians or sea-squirts (Piures) were sought also for food.

Fish were taken with: Nets of bark, of chupon (*Greigia sphacelata*), and, later, of hemp; ponchos and baskets, baited and put under water (Guevara Silva, 1911, p. 150); fykes of quila (*Chusquea* sp.); hook (of thorn, bone, or wood) and line; spears, including a three-pronged one; clubs with studded heads; and weirs of branches, used by the Indians of Chiloé (Olivares, 1874, p. 365). Fish were also taken by poisoning small lagoons or still water in streams with *Drimys winteri* (Febrés, 1882, s. v. rincún; Housse, 1939, p. 171). No whale hunting is reported.

Food storage.—Grain and other food were stored in hill caves, on elevated platforms, and in hide sacks; potatoes, in bins within the hut.

Food preparation and cooking.—Cooking was done by the women. Maize was prepared in many ways. Green maize was boiled in earthen pots or roasted over the fire or in hot embers, or it was dried, shelled, roasted in sand, and ground to flour with metate and two-handed cylindrical muller (Ovalle, 1888, 12: 158; Claude Joseph, 1931, pp. 40–41). Two kinds of flour were made: raw, or rəŋo; and parched, or mürke. From the first was made a bread, kofke, in the form of flat cakes, or tortillas, baked in ashes, or in pit ovens. A sort of leaven therefor was made from a bit of the grain chewed by the old women and children and left to ferment in water or in a hole in the ground (Latcham, 1909, p. 342 [post-Columbian?]). The parched maize (or wheat) in cold water was regularly taken on arising in the early morning and after meals. A bread was also made of huequen, teca, mango, and lanco. (Cf. supra under Wild Plant Foods, p. 702.)

Meat was preferred lightly cooked. Some bits were eaten raw. Meat was cut in strips and sundried or smoked to make charki, or jerked meat.

Honey, ají, and salt were used as condiments. Salt was obtained from the sea and from Andean salt deposits. Where salt was lacking, as near the Coast, food was cooked in salt water, or plant ashes were substituted. The oil made from madi seeds was much used in cooking. Wild thyme and wild mint were also used as seasoning (Latcham, 1909, p. 341).

A great number of different dishes were made. Stews or broths were the more common; e.g., meat and maize, maize and potatoes, beans and grease, etc. A favorite dish was made of potatoes allowed to rot a couple of months in stagnant water. Another favorite was apoll, parboiled lungs of an animal so slaughtered that they filled with blood. Raw blood of cattle was drunk or eaten coagulated.

Eating.—Fast was broken in the morning with the maize (or wheat) flour drink mentioned above. In early times, two meals a day were customary, the first just before noon, the second at dusk, according to some sources (Barlaeus, 1647, p. 268), but not all. (Cf. Marcgrav, 1648, p. 285.) Round wooden plates and spoons of wood or bivalve shells were used at meals. Gourds served as cups. The pottery plates and the wooden or clay cups with handles appear to be more recent. There were no tables; the *Mapuche-Huilliche* ate sitting on the ground.

The men ate together; the women ate apart from them. The wife placed food before her husband, but he did not eat till she told him to do so. It was likewise bad manners for a guest to start eating before being told by his host to do so. At a fiesta, it was a grave discourtesy for a guest to leave his plate not wiped clean (Rosales, 1877–78, 1:152, 154).

SETTLEMENTS AND DWELLINGS

Settlements.—The *Mapuche-Huilliche* lived, not in villages proper, but in settlements. Each settlement was made up of a number, usually small, three to eight or more, of families or households, each in its own dwelling. The households or homesteads were set up within sight of but at appreciable distances from one another—for fear, it was reported earlier, of witchcraft (Rosales, 1877–78, 1:150–51) or of poisoning (González de Nájera, 1889, p. 48)—and each settlement or loose cluster of households was separated by somewhat greater distances from the nearest ones. The settlements were located mostly in valleys or plains along streams and rivers. Generally speaking, each settlement was made up of kin (Marcgrav, 1648, p. 285) and had its own cacique. Some of the forts, settlements, or dwellings appear to have been surrounded with a kind of palisade. (Ercilla, canto 1, 1910, p. 8; Mariño de Lovera, 1865, p. 130; Tribaldos, 1864, p. 21).

Dwellings.—Very often huts (ruka, tabú) (pl. 153, *bottom*) were located on eminences; thus friendly or unfriendly visitors could be spied some distance off, and an eye could be kept on the livestock. More commonly, dwellings were substantially built of timber or cane framework, oval, polygonal, or rectangular in ground plan, and with thatch roof reaching nearly or quite to the ground level (fig. 72). Dimensions varied, from 16 to 20 feet (5 to 6 m.) long by 10 to 13 feet (3 to 4 m.) wide, to 66 feet (20 m.) long by 33 feet (10 m.) wide, occasionally even larger. A cacique's dwelling observed by Smith (1855, p. 295) was estimated by him as circa 140 feet (43 m.) long by 30 feet (9 m.) wide, with the ridge pole about 15 feet (4.5 m.) above ground. Mariño de Lovera's figures (1865, p. 124), 400 to 800 feet (122 to 244 m.) square, for dwellings in Cauten, appear too high, even though he explicitly states that he measured them several times.

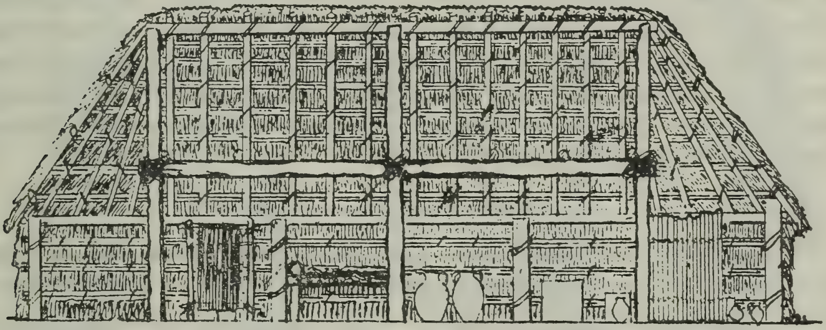


FIGURE 72.—Schematic cross section of the interior of a *Mapuche* dwelling, or ruka. (After Claude Joseph, 1931, fig. 9.)

Around Imperial, Pedro de Valdivia (1861, p. 55; *in* Gay, 1846–52, 1:142) in 1551 found well-built dwellings of large planks, many of these plank houses being very big, with from 2 to 4 and 8 entrances. Plank houses, with grass roofs, were also in use in the late 18th century among the *Huilliche* of the Chilotan archipelago (González de Agüeros, 1791, pp. 111–12). Very large shelters, with from 4 to 6 entrances, were also reported in 1558 in the Coronados Gulf region, by Goicueta (1852, p. 93). In a single house there sometimes lived, according to Sors (1921, 38:46), as many as 80 or 90 persons, though 30 to 40 was the more common number.

Most huts, however, at least in *Mapuche* territory, had only one or two entrances. Doors and windows were lacking. An opening or openings in the center of the roof served as smoke hole.

A small conical thatched hut was also used. In addition, warriors on the march would put up a temporary shelter against rain and hot sun by arching four sticks and covering these with four large leaves of paŋke (*Gunnera scabra*).

The interior of the larger huts was commonly divided into compartments or alcoves opening off the central section and serving as sleeping quarters for the different families or wives. There was ordinarily a separate fireplace for each married couple or wife. Storage space was provided by lofts and cane-partitioned bins.

Huts were erected in two or three separate stages by the voluntary joint labor of the men of the settlement or community, on the mingaco plan, with an eating and drinking feast after the completion of each stage. (Rosales, 1877–78, 1:149; Latcham, 1909, p. 337; Guevara Silva, 1911, pp. 143–46; Manquilef, 1911, pp. 22–39; Moesbach, 1936, pp. 173, 176–78.)

House furnishings.—In earlier times there were no beds, tables, or chairs. The natives slept on skins or on heaps of grass or rushes, placed on the ground, using skins or ponchos as cover and a section of tree trunk, or a bundle of rushes or skins, or a stone, as headrest. The low platform bed was of later introduction. They ate seated on the ground or on tree-trunk sections. Hide and basketry containers served for storing food and other possessions; clay jars for holding chicha. (For details on house furnishings, see especially Claude Joseph, 1931, pp. 39–48, 229–51.)

DRESS AND ORNAMENTS

Garments.—In recent times, apart from the generally adopted European clothing, the more characteristic garments of the *Mapuche-Huilliche* men were the chamall, the chiripa, and the makuñ (poncho); of the women, the kəpam and the ekull (ükella). Chamall, makuñ, and kəpam are apparently words of *Araucanian* origin; chiripa and ekull, of *Quechua*.

The man's chamall was a rectangular piece of woolen cloth covering the body from the chest or waist down, and secured at the waist with a belt; his chiripa, a cloth of chamall type, worn drawn up between the legs from behind and secured at the waist, thus forming a sort of loose, wide breechclout-trunks; his makuñ, a poncho proper, a rectangular oblong woolen cloth, plain or striped or sometimes figured, with vertical slit in the middle for the head, and with the sides not sewn together.

The woman's kəpam was a rectangular woven cloth, of chamall shape, pinned over one shoulder and leaving the other bare, reaching from above the breasts and under the armpits to the calves or feet, and secured at the waist with a belt; her ekull, a shawl or capelike garment, worn over the shoulders and pinned at the breast, commonly with a silver tupu.

Our early sources on the *Mapuche-Huilliche* are, as a rule, none too specific or detailed in describing native clothing, and in some cases use the same *Araucanian* or Spanish word to denote different garments.

We can, nevertheless, trace back the chiripa among the Argentine *Araucanians* and *Mapuche-Huilliche* to the first half of the 19th century (D'Orbigny, 1835–47, 4:183; Smith, 1855, p. 184), the kəpam and ekull to the second half of the 18th (Molina, 1901, p. 148), the makuñ, the poncho proper, to the mid-17th. (Marcgrav, 1648, pp. 283–84, woodcut, p. 284; cf. Ovalle, 1888, 12:160; Brouwer, 1892, p. 60.) The kəpam resembles in many respects the woman's garment described and figured by Marcgrav (ibid.). It is in Marcgrav (ibid.), too, that we get our earliest unmistakable record, not only in Chile but in South America, of the true poncho (fig. 73). Montell (1925; 1929, pp. 238–244) has presented strong evidence for his theory that the true poncho as distinct from the widely distributed Andean sleeveless shirt, was a *Mapuche-Huilliche* invention, and has suggested that

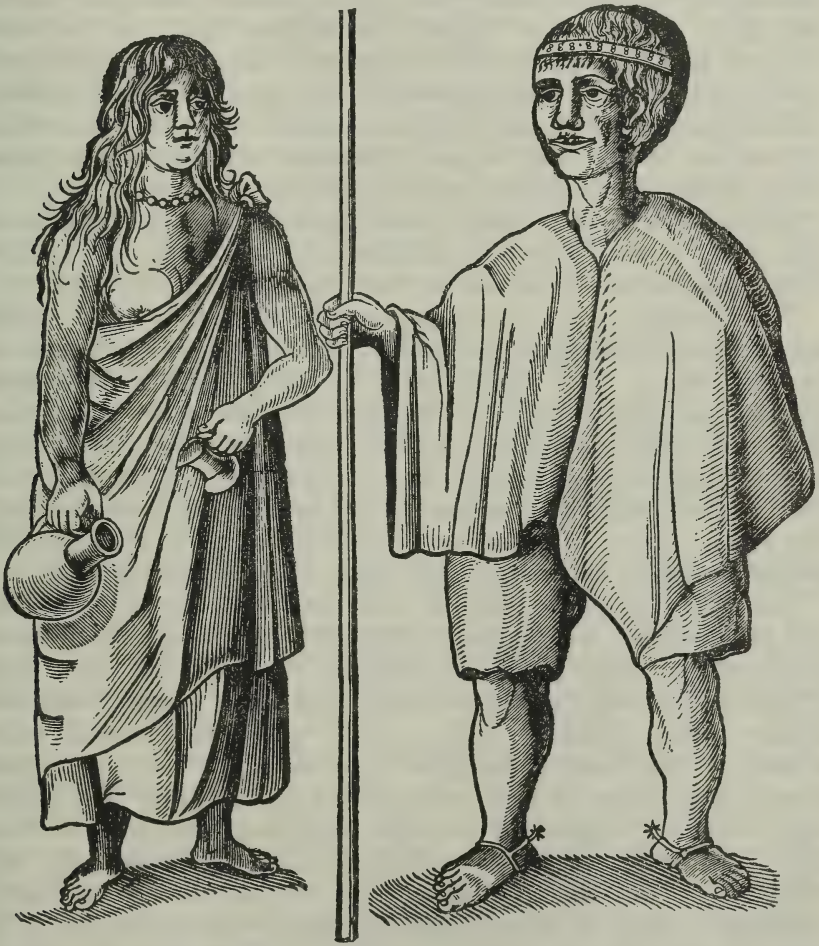


Figure 73.—Earliest known illustration of a poncho (*Araucanian*). (After Marcgrav, 1648, p. 284.)

it was probably a modification of the sleeveless shirt to permit greater freedom of action on horseback.

As described by Mariño de Lovera (1865, p. 230), the early *Huilliche* men of the Ancud region wore breeches, shirt, and cape, all of [llama] wool. The shirt, like the *Mapuche* type described by Góngora Marmolejo (1862, p. 2) and González de Nájera (1889, p. 39) as "without sleeves," was presumably the typical Andean rectangular sleeveless shirt. González de Nájera's description (ibid.) of the short breeches as a "paño revuelto" serving as a "pañete" and reaching to the midthigh is somewhat suggestive of the later chiripa. According to Marcgrav (loc. cit), the breeches reached to the knee. According to Brouwer (1892, p. 60), the early Chilotans wore breeches that flared at the bottom like a sailor's, and a mantle, but no shirt or coat.

Mapuche-Huilliche garments were mostly of woven llama wool. The púnu, a small apronlike, leather pubic covering, was used by hockey-players and transvestites (Bascuñan, 1863, pp. 61, 107).

The *Huilliche* of the Ancud region were wearing pointed woolen caps or hoods when first encountered by the Spaniards (Mariño de Lovera, 1865, p. 230; Ercilla, canto 36, 1910, p. 579). Elsewhere, however, as a general rule, the *Mapuche-Huilliche* went without hats. Both men and women used a woven woolen fillet (tari longo, trarülo*ŋ*ko) to bind the hair, caciques often using a silver band in place of it. Warriors frequently wore animal or bird heads or skins on the head. The cotton, silk, or woolen square worn like a turban, and the woman's beaded headgear, are not reported earlier than the 19th century.

The earlier *Mapuche-Huilliche* ordinarily went barefoot. In the mid-17th century, low footgear ("caligae") were being used by men on festival occasions (Marcgrav, 1648, p. 283). By the second half of the 18th century, natives of rank were using woolen boots and leather sandals (Molina, 1901, p. 148), which later became more common. The zumel (shumel), or "bota de potro," made of the hide from the leg of horse or cattle, softened and allowed to dry on the foot, was introduced, apparently from the Argentine Pampa, in the first half of the 19th century (de la Cruz, 1836, p. 33; Smith, 1855, pp. 323–324). It was used as a riding boot, the point of the boot being left open to allow the rider to grip the stirrup with his big toe. The tamango, pieces of sheepskin or cowhide with the hair side in, lashed on the feet and legs for crossing the Andean passes in the snow, was used, apparently by Indians, at least at the Uspallata Pass in *Picunche* country (Lenz, 1904–10, 2:704, 899; on the earlier *Pehuenche* snowshoes, see infra, section on "*Pehuenche,*" p. 760).

Hair.—References in the early sources to coiffure are scattered and vague. Brouwer (1892, p. 60) found the mainland *Huilliche* men with their hair cut short around the ears. (See also Góngora Marmolejo, 1862, p. 2, and Marcgrav's woodcut, 1648, p. 284.) Since at least the early 17th century, the men let their hair grow in long loose locks to the shoulders, sometimes doubling it upward and rolling it round the head, and cutting it in a fringe across the forehead. On going to war, the head was shaved, leaving only a corona like a friar's (Mariño de Lovera, 1865, p. 122). It was considered a great indignity to have one's hair cut off by force (González de Nájera, 1889, p. 47).

All accounts since the late 18th century describe the women's hair as done up in two long braids (Carvallo i Goyeneche, 1876, p. 136, and others thereafter). Molina says "varias trenzas" (1901, p. 148). Ovalle (1888, 12:161) and González de Nájera (1889, p. 47) refer to tresses or braids, but not clearly to two only. According to Marcgrav (1648, p. 283, cf. also woodcut, p. 284), the women wore their hair loose, but bound it up during menses. Some Chilotan women of the Castro region wore it bound with small woven bands; others, loose and hanging over the shoulders (Brouwer, 1892, p. 60). A woman with short hair might add to her own the hair cut from a young girl's head (Félix José, 1916, 1:287).

The comb (rəna) used was commonly the brush-comb, made of a bunch of reeds or thick grass sticks well tied together.

Depilation of facial (including eyebrows) and pubic hair by men and women with the use of two shell valves or of two trapezoidal metal plates serving as tweezers was customary, in fact, de rigueur. (Marcgrav, 1648, p. 283; Rosales, 1877–78, 1:167; Havestadt, 1883, 2:806–7; Guevara Silva, 1911, pp. 50, 52.)

Body ornamentation.—No mutilations in the way of head deformation or piercing of lips or septum are reported. Ear lobes were pierced for earrings. Tattooing was completely absent. There does not appear to have been much face or body painting in early times. González de Nájera (1889, p. 46) reports it absent, but this is seemingly too sweeping (L. de Valdivia, 1887, s. v. colú; cf. Medina, 1882, p. 170). At any rate, more recently face painting was not uncommon (Guevara Silva, 1908, p. 15).

Bodily adornments.—By the men, some use was made of feathers in peace time, or by warriors for hair- and helmet-adornments (Ercilla, 1910, p. xix; Molina, 1878 b, pp. 439, 445), but in general feathers played a minor role in *Mapuche-Huilliche* body decoration. In the main, too, except for the *Pehuenche*, the *Mapuche-Huilliche* men devoted their attention to decorating their saddle gear rather than themselves. Headmen formerly wore large silver earrings.

Women's chief adornments in earlier times were necklaces of llancas (llaŋka), tupu pins, bracelets, and ear pendants. The llancas were green or bluish-green stones, mostly malachite and azurite, perforated and polished. Beads of sea shells were also used, but were not nearly so highly esteemed as the llancas. The tupu (from *Quechua*) was a long metal pin with a large discoid, semicircular or spherical head used to fasten the ekull. Glass beads, chaquiras, were early imported by the Spaniards, and later displaced the aboriginal llancas. The characteristic large quadrangular metal ear pendants (chapəll, upül) are clearly recorded as early as the middle of the 17th century (Rosales, 1877–78, 1:159); the wheel-shaped ones, still earlier (González de Nájera, 1889, p. 47).

In the 19th century, the number and variety of silver and beaded women's adornments (as described in detail by, e. g., Moesbach, 1936, pp. 213–14, and others)—necklaces, bracelets, anklets, finger rings, ear pendants, brooches, buckles, and so forth—was very great. In general, however, this represents the final phase of a gradual evolution from a much simpler style of women's adornment current at the time of first White contact, an evolution marked by the substitution of glass chaquiras (beads) for the native llancas, by more and more widespread use of silver, and by the luxuriant growth of new forms of both bead and silver "jewelry."

TRANSPORTATION

Land transportation.—There were no roads such as were common in *Inca* territory, but only trails. Bridges (kuikui) consisted merely of a log or several logs spanning small streams. The tumpline and fiber bag of simple-loop netting technique were used for carrying goods. The llama served as a pack animal; the dog was not so used. Soon after the coming of the Spaniard, the *Mapuche-Huilliche* took to horse riding. (Cf. supra under Domesticated Animals, p. 704).

Water transportation.—Three chief types of watercraft were used by the *Mapuche-Huilliche:* the plank boat, the dugout, and the reed balsa. As Lothrop (1932, p. 253) points out, all three were more or less crescent or new-moon shaped, with raised and pointed bow and stern.

Plank boats (dalca, piragua) of 3 planks were found in large number among the *Araucanian*-speaking people of Coronados Gulf when first encountered by Cortés Hojea in 1558 (Goicueta, 1852, p. 91). Plank boats, while more characteristic of the Chilotans and southern mainland *Huilliche,* were also observed farther north (Oña, canto 10, 1917, p. 349, mouth of the Bío-Bío River). The planks were lashed together with fiber rope (of *Chusquea* sp.), which does not rot under water, and caulked with leaves of tiaca (*Caldcluvia paniculata,* according to Medina, 1882, p. 193) and inner bark of maqui (*Aristotelia maqui*). They were propelled by about 8 to 12 rowers, a coxswain steering at the stern with a pole or paddle. In a favorable wind, a sail was set up. Up to the end of the 17th century, the dalca was of only 3 planks, but, in the course of the 18th century, it developed into a 5-plank (Olivares, 1874, p. 371) and later a 7-plank craft. (González de Agüeros, 1791,

p. 66; Cooper, 1917, pp. 198–99; cf. Lothrop, 1932, pl. 21, *a–d*, and fig. 8, with details of construction of 7-plank dalca.)

Dugouts (huampo, wampu (L. de Valdivia, 1887, huampu), canoa) were according to Rosales (1877–78, 1:174) usually small, with a crew of three men; the largest he had ever seen was one in Toltén with a carrying capacity of 30 persons. Of a crew of three, one man seated at the stern steered with a paddle, the other two paddled standing. Such dugouts were early reported from the Imperial (Bascuñan, 1863, p. 89) region. (Cf. illustration from Gay, *in* Lothrop, 1932, pl. 16, *b*.)

Balsas of cigar-shaped bundles of various kinds of reeds, lashed with ropes made of voqui, and of new-moon shape, pointed at both ends, were in use on the mainland around the Imperial River, Toltén River, and elsewhere, and on the islands of Santa María and Mocha.

Other "balsas," apparently rafts proper, made of *Puya* sp. or of "cypress" (*Libocedrus chilensis*) or "laurel" (*Laurelia aromatica*), all very light and buoyant, were also used on the Island of Santa María and on the mainland. The watercraft of inflated sealskins, of the north-central Chilean Coast, has not been reported from the *Mapuche-Huilliche* region.

Sails are reported as early as the middle 17th century, by Rosales (1877–78, 1:175), with the dugout when the wind was favorable, but it is uncertain whether they were used in pre-Spanish days (Friederici, 1907, p. 74). Details on type or types of paddles or oars used with early *Mapuche-Huilliche* watercraft are lacking. Lothrop (1932, p. 245, pl. 21, *b*) describes and figures a [European type?] two-piece oar with crutchless rounded shaft and flat square-ended blade, used with a Chilotan plank boat. Double-bladed paddles have been reported occasionally (Looser, 1934).

MANUFACTURES

Basketry.—Various kinds of basketry containers were woven from plant fibers. Some of those more commonly recorded are: The loŋo, made of *Chusquea*, of very fine weave; the chaiwe, made of voqui (*Boquila trifoliata*), small, serving as a filter for chicha or as a sieve or colander; the llepü (fig. 74, *left*), of *Chusquea*, of flat round platter form; the külko (fig. 74, *right*), of *Lapageria rosea*, a large basket; the yole, of bejucos. (For techniques and types, cf. Claude Joseph, 1931, pp. 241–244.)

Cordage.—Various plant fibers, particularly from ñocha (*Greigia landbeckii*) or molkachu (*Cyperus regetus*), were used in the making of rope, cord, fish nets and lines, carrying bags (pilua), and baskets (figs. 75, 76). (For details, cf. Claude Joseph, 1931, pp. 244–246.)

Spinning and weaving.—Weaving with llama wool was well developed at the time of the Contact. Sheep wool was later substi-

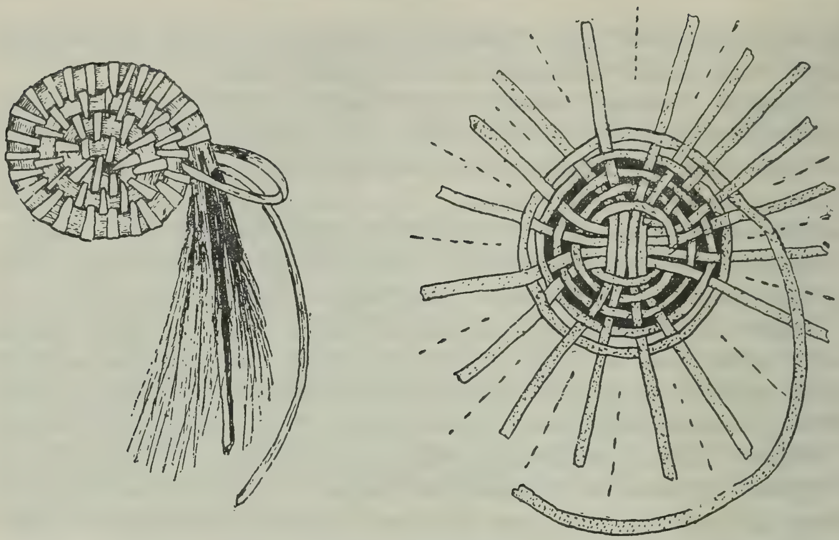


FIGURE 74.—*Araucanian* basketry techniques. *Left:* Llepu basketry tray. *Right:* Külko basket. (After Claude Joseph, 1931, figs. 38, 36, *b*.)

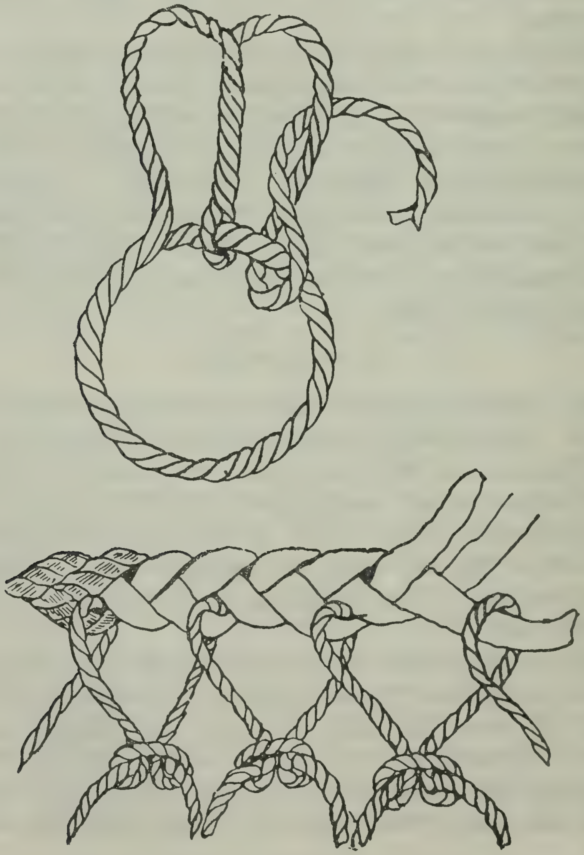


FIGURE 75.—An *Araucanian* pilua carrying bag. *Top:* The base. *Bottom:* The top border braid. (After Claude Joseph, 1931, fig. 44.)

tuted. Dog-hair weaving was early reported (Goicueta, 1852, p. 96) among the *Chono*, but not among the *Mapuche-Huilliche*. The Chilotans made mantles from the bark of *Aristotelia maqui*, woven in some manner (Rosales, 1877–78, 1: 224). Cotton weaving was absent. Spinning and weaving were women's work.

Wool, after being sheared, washed, dried, and combed, was spun on a wooden spindle, pointed at both ends. The wool was wound round the left arm, its end twisted with the thumb and index finger of the right hand and fastened to the spindle, and the spindle was also twirled with the thumb and index finger of the right hand.

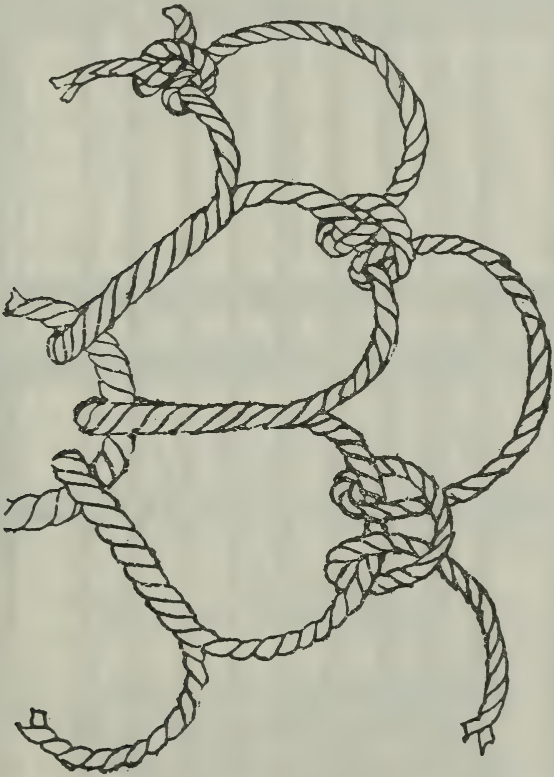


Figure 76.—*Pilua* carrying bag. Detail of the side-wall of the bag. (After Claude Joseph, 1931, fig. 45.)

For weaving (fig. 77; pl. 156, *top*, *right*) a two-barred loom (witral) was used, usually vertical for larger pieces of cloth, but stretched on the ground horizontally for belts and fillets. Molina (1901, p. 122) mentions a second kind of loom, "not very unlike that used in Europe," but gives no other details.

The woven products were used mainly as clothing and adornment, but also as bedclothes and saddle-blankets. Some of the products were of uniform color; others were in varicolored stripes, or with geometrical designs of crosses, squares, triangles, etc., or sometimes with conventionalized human figures. Flower, bird, and animal figures were apparently very modern developments. (For details on techniques of weaving and on woven products, cf. Claude Joseph, 1928 a; Guevara Silva, 1929, 2:262–71; Moesbach, 1936, pp. 218–30; Looser, 1927, pp. 5–9; for illustrations, Oyarzún and Latcham, 1928.)

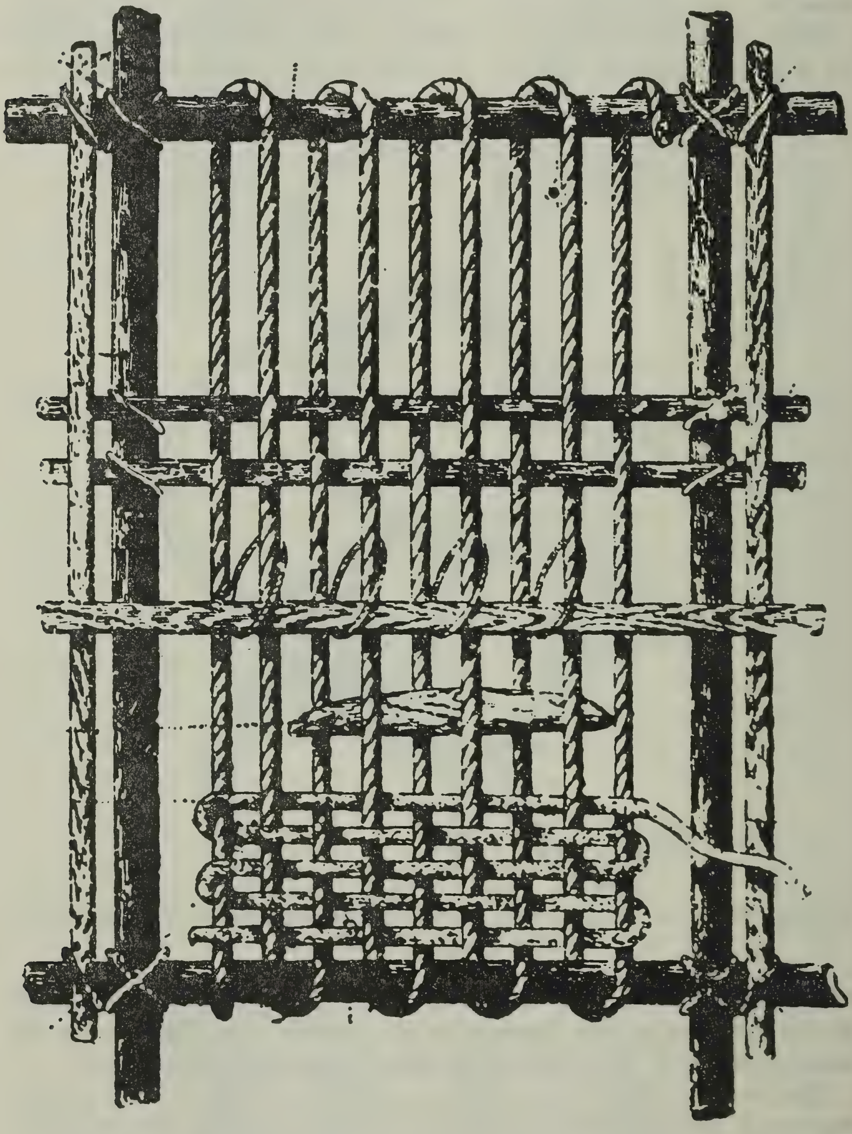


FIGURE 77.—*Mapuche* loom. (After Claude Joseph, 1928 a, p. 998.)

Needles were made of thorns, wood, and bone.

Dyeing.—Dyes of many colors, the majority of them derived from plants but some from earths, were used to tint the wool. Mineral substances were used to dye wool black, red, yellow, and white; plants, for black, blue, green, red, yellow, coffee, and violet. (Cf. list of plant dyes in Lothrop, 1930, pp. 333–35.) Indigo was obtained by barter. Wool in natural coffee color and grays was also used.

A technique of tie-dyeing of the white warp, before the weft is woven, with ties of string and maki bark is described in detail by Felipe Reyes (*in* Guevara Silva, 1913, pp. 176–77; cf. Latcham, 1909, p. 339; Lothrop, 1930, p. 328; Millán, 1934, 1:220–22); a technique of combination tie- and resist-dyeing of the white warp, with the use of a white clayey earth paste as a resist, by Claude Joseph (1928 a, pp. 1029–1031).

Skin dressing.—The skins of various wild and domesticated animals, such as the puma, guanaco, wildcat, coypu, fox, deer, otter, sheep, horse, cattle, and dogs, were used as rugs, beds, saddles, straps, etc. If dressed with the hair on, the skin was stretched out, pegged on the ground. When dried, it was softened with the hands and by drawing to and fro in the notch of a forked stick hung to a post. Straps and thongs were rubbed with grease to keep them supple. To remove the hair, the skin was soaked in wood ashes and water, then fleshed with sharp stones, shells, or knives, until the roots of the hair were loosened. Then the hair was plucked out, and the skin dressed as above (Latcham, 1909, p. 339). According to Félix José (1916, 2:96), salt was put on skins to prevent rotting, they were softened by hand, and were then anointed with grease.

Pottery.—Pottery has been made and widely used by the *Mapuche-Huilliche* since pre-Hispanic times. Their country is rich in suitable clays. Pottery making was the woman's task. Tempering was done with fine sand or pulverized rock or shell; shaping, by the coiling method (pl. 154, *left*); smoothing, with a spatula, usually spoon-shaped. The kilns were pits dug in the ground or on hillsides, or firing was done inside the dwelling. Vessels of many kinds were made (pl. 154, *right*): Cooking pots, large jars with rounded or flat bases and without handles for carrying water or holding chicha, single- and double-bellied pitchers with one or two handles, the kütru metawe (an effigy pitcher crudely resembling a steamer duck), plates, dishes, etc. Some of these types are seemingly of rather recent introduction. A common pitcher type early depicted (Marcgrav, 1648, ill. p. 284) and occurring archeologically (Medina, 1882, figs. 184, 204–07) has a globular belly, rather narrow neck, and a single handle. In general, the pottery of the *Mapuche-Huilliche* and archeological specimens from their area are distinctly inferior in workmanship and decoration to the pottery of the historic and prehistoric cultures to the north and and northeast of the *Araucanian* region. Except for some geometric designs on some of the archeological finds around Valdivia, most earlier *Mapuche-Huilliche* pottery was undecorated, and of comparatively crude workmanship. (For details on techniques and types, cf.: Latcham, 1928 b, pp. 47–56, 195–219; Guevara Silva, 1929, 2:247–62; Claude Joseph, 1931, pp. 43–48.)

Stoneworking.—The early *Mapuche-Huilliche* made considerable use of chipped-stone artifacts, such as arrowheads, and of polished-stone ones, such as celts and perforated rings, but no detailed accounts of processes of chipping, polishing, or drilling have come down to us.

Mining and metallurgy.—Some use was made by the *Mapuche-Huilliche* in pre-Hispanic times of gold, silver, and copper for adornments, utensils, and weapons, as evidenced by the not infrequent mention thereof in the very early chroniclers (e.g., Ercilla, 1910, p. xix; Mariño de Lovera, 1865, pp. 112, 125; González de Nájera, 1889, pp. 46–47; Bascuñan, 1863, p. 201; Rosales, 1877–78, 1:159). Some mining for or gathering of gold was done by the *Araucanians* apparently on their own, under pressure from the very early conquistadors. Probably, too, some rough shaping and hammering was done. But there is no record of smelting or other metallurgical processes in any of the early sources (McClafferty, 1932, pp. 36–40).

Even silversmithing, as practiced so skillfully by the 19th-century *Mapuche-Huilliche*, begins to be described in our sources only after the close of the 18th century although it may have been developed a little earlier. Poeppig's *Pehuenche* of the Antuco region (1835–36, p. 386) used pointed stones instead of hammers in their silversmithing. Silversmithing, too, is first reported among the *Araucanian*-influenced *Tehuelche* only in the first third of the 19th century, about a century after their acquisition of horses and other *Araucanian* elements (Cooper, 1925, p. 408). In modern *Mapuche-Huilliche* silversmithing, crucibles of stone, with bellows, were used to melt the silver coins. The molten metal was poured into clay or sand molds (Edwards, 1929, p. 63), and after cooling, was worked with file and hammer over an anvil. The various products were used chiefly as female adornment and saddle-gear ornamentation. (For details on silversmithing techniques and products, cf.: Claude Joseph, 1928 b; Guevara Silva, 1929, 2:274–83.)

Fire making and illumination.—Fire was made with a drill, before the introduction of flint-and-steel and matches. The hearth (domo, "woman"), with a small perforation in the center, was held on the ground with the feet; the drill (wentru, "man"), twirled with the hands. The only record, to the present writer's knowledge, of producing fire by striking two stones together is that by Oña (canto 4, 1917, p. 144), from Talcaguano region, near the *Mapuche-Picunche* borderline, and the account given by this none-too-reliable writer may not refer to an aboriginal fire-making method proper. Fire, once made, was preserved a couple of days or more by igniting a piece of dry trunk of chagual (*Puya coarctata*) at one point and letting it smoulder (González de Nájera, 1889, p. 59). Lighted bundles of *Chusquea* were used as torches (küde).

Miscellaneous manufactures.—Gourds were made into dishes, bowls, trays, and containers for water and chicha; shells, into drinking vessels and spoons; later, bullock's horns were made into water containers. Wood was used to make plates, bowls, drinking vessels (malwe), and many other objects (cf. Claude Joseph, 1931, pp. 229–41); sea shells were earlier used for scraping wood (González de Nájera, 1889, p. 97). Awls were made of a sharpened bone. A small steel adze came into use later (Claude Joseph, 1931, p. 235, fig. 23). Sacks (refüη) for storing grain were made of cowhide or horsehide; small bags of skin (yapaq) for holding parched grain. (Cf. for futher details, Claude Joseph, 1931; other artifacts have been noted passim in preceding sections of the present paper, q. v.; see also infra under Weapons, p. 730.)

MARRIAGE AND THE FAMILY

Acquisition of mates.—Beyond general statements such as Molina's (1901, p. 189), that "in marriage they scrupulously avoid the degrees of immediate relationship," we have few dependable details on *Mapuche-Huilliche* incest prohibitions. According to Guevara Silva (1929, 1: 328, 2: 162), marriage was prohibited between grandfathers and granddaughters, uncles and nieces, and children of brothers. Incestuous sex relations are reported to have occurred at times on the occasion of drinking sprees. Unilateral cross-cousin marriage with the mother's brother's daughter was the most preferred one but seemingly was not mandatory. A male called his mother's brother's daughter ñuke (mother) while she called him pəñeñ ("son," w. s.); if he did not marry her, he called her children and they him by sibling terms. A native concept rationalizing the cross-cousin preference was: "So there will not be any discord, she will look on me as her son and so will live in peace with me" (Coña, *in* Moesbach, 1936, p. 201). Marriage with wife's brother's daughter reported to Hallowell (1943, p. 490) by Collió Huaiquillof is not recorded elsewhere in our sources. Sororal polygyny was common, "to avoid quarrels and jealousy" (Guevara Silva, 1913, p. 40). Under certain conditions (cf. infra) widows were in earlier times inherited by the deceased husband's eldest or other son (except the son's own mother), or brother, or nearest male relative.

The basic and normal procedure in marriage was the payment of the bride-price, a procedure very commonly accompanied with dramatized capture. The prospective groom either personally or through go-betweens entered into negotiations with the father or elder relative of the girl. Her consent was usually, but apparently not always, sought. The bride-price consisted of llamas, mantles, shirts, adornments (llaŋkas), food, chicha, and, later, chickens, cattle, horses, bridles, spurs, and other valuables. From 10 to 100 such items might be demanded, although it was not always required to pay all at once. The relatives and friends of the groom would contribute toward the bride-price if he could not get it together unaided, which put him under a debt of honor to reciprocate when later they should need his contributions. The bride-price was turned over primarily to the girl's father or other elder relative, some of it directly to her mother. Much of it was distributed to her paternal and maternal uncles, her brothers, and other kin, and much of it consumed at the marriage feast, to which her father and kin also contributed large quantities of chicha.

Dramatized capture of the bride, or simulated reluctance and resistance on the part of her and her female relatives and friends, very commonly accompanied marriage, and followed various patterns. The consent of the girl's father or parents having been obtained, the groom with some male relatives or friends would seize the girl at her father's house or elsewhere; she would scream and struggle; her women relatives and friends or her parents and brothers would put up a simulated but rough-and-tumble resistance; the girl would be carried away by the groom on horseback to his house or to the woods near thereto; after 1 to 3 days, he with the girl and his companions would go to her house where her mother would give them a meal. Then, or a short time after, the bride-price was given over and the wedding feast celebrated.

Apart from simulated capture with the father's consent and with or without the previous consent of the girl or against her wishes, and apart from marriages with women captured or stolen from out-group or enemy tribes, some instances of in-group real capture and forcible detention against both the girl's and her parent's wishes may have occurred. (Cf. Claude Joseph, 1933-34, pp. 707–08.) But generally the father's consent was obtained post factum and the bride-price given over to him. In very rare cases, if the seized girl was unwilling at all to live with her simulative (or real) captor, she hanged herself (Moesbach, 1936, p. 241). Some elopements, too, occurred, with the consent of the girl but without that of her parents. As a rule, after capture or elopement, if the father absolutely refused post factum consent, his daughter was returned to him (Havestadt, 1883, 2:639).

The wedding rites and observances consisted mainly of the transfer and distribution of the bride-price, of the rendering of specially composed ballads, of a sacrifice of a llama or other animal, of singing, dancing, feasting, and, of course, very liberal imbibing of chicha or other alcoholic beverages. The feasting would last until all the chicha was gone, even 4 to 6 days.

The family.—No polyandry is reported for early or recent times. Polygyny was prevalent. Commoners had 1 or 2 wives; wealthy and other prominent men had more—4 to 6 to 10, with occasional cases of 18 (Mariño de Lovera, 1865, p. 124), 20 (Bascuñan, 1863, p. 453; Brouwer, 1892, p. 81), or even 30 (Sors, 1921, 38:46; 39:180).

One wife, ordinarily the first one married, was head wife, with a certain precedence and authority over the others. Each wife commonly had her own apartment and hearth in her husband's dwelling, or, according to Marcgrav (1648, p. 285), if the husband were wealthy her own separate hut, and, according to Coña (*in* Moesbach, 1936, p. 192), her own garden plot, the products of which were hers. In the polygynous households, wives shared their husband's bed by turns, a night to a week or more each.

So far as can be gathered from the meager and often conflicting accounts of earlier and more recent writers, the wives' position was in theory one of marked inferiority and subservience to the husband; in actuality, however, while some harsh treatment is recorded, more generally wives appear to have been treated with a certain consideration and to have enjoyed appreciable freedom.

If a wife were badly maltreated, she could go back to her people who would then have to return the bride-price or its equivalent to her husband. Divorce was common and apparently rather easy. Sterility, infidelity, desertion, and ill-treatment are mentioned more commonly as the grounds therefor. In all cases, the bride-price had to be given back to the husband. A childless wife could be sent back to her father. If a woman deserted her husband to marry another man, the latter had to pay the husband the equivalent of the bride-price the husband had paid for her.

An adulterous wife could by customary law be put to death by the husband, together with her paramour, or else she was sent back to her father. But if the paramour were killed by the offended husband, the latter was liable to blood-revenge from the killed man's relatives; if the guilty wife were killed, her husband could not claim the return of the bride-price. More commonly, wifely adultery was compounded through large payments by the paramour to the husband. Actually, adultery on the part of wives seems to have been rare (Bascuñan, 1863, p. 332; Rosales, 1877–78, 1:160). When a wife returned to her parents, she usually took with her her small children.

If a man's wife died, even through no fault of his, he had to make payments of llancas (llaηkas) or other valuables to her people; if through his fault, higher payments.

A widow with small children commonly returned with them to her father or relatives, older or grown-up children remaining with the deceased husband's people. Widows in polygymous households very commonly fell to the man's heir or heirs, that is, his son or sons (except own mothers), his younger brother or other brothers, or other near male relatives.

Among at least the modern *Mapuche*, widows or women who had been deserted without cause by their husbands could take the initiative in seeking out and proposing marriage to men (Claude Joseph, 1933–34, p. 712).

Parent-in-law avoidances were in force, between mother-in-law and son-in-law, and between father-in-law and daughter-in-law. Saluting, directly addressing, naming, and looking were the chief specific prohibitions. A son-in-law was obligated to aid, in all ways as needed, his wife's father and relatives as long as they lived.

Unmarried women were very free to bestow sexual favors as they pleased (Olivares, 1864, p. 61). In Rosales' vivid phrasing: "la virginidad ni se pide ni se paga," nor was a man obliged to marry a girl with whom he had had sexual relations (1877–78, 1:160). Actually, unmarried girls were quite loose in heterosexual behavior; as to female homosexuality, our records are practically silent. Sporadic cases of individual prostitution are recorded; likewise of daughter-lending to guests; and more rarely of wife-lending, especially during drinking feasts. Various types of plants used as love-charms are noted by Félix José (1916): under lelliuken, paillawe, pəlpəl, weñáηwe, wədawe.

KINSHIP

The kuga.—Among the *Mapuche-Huilliche* there prevailed the kuga (cuga, cüga, cunga; also elpa) kinship and naming system. The word persisted in use up to about a 100 to 150 years ago, but no memory of it now survives. The kuga is described by our chief original sources as a: linaje, descendencia, casa, familia, parentela, parentesco (L. de Valdivia, 1887, s.v. cúḡa; González de Nájera, 1889, p. 46; Rosales, 1877–78, 1:166; Febrés, 1882, s.v. cùga; Molina, 1901, p. 187; Carvallo i Goyeneche, 1876, p. 139); genus, progenies, familia, gens, stirps, stemma (Havestadt, 1883, 1:377, 399, 2:640–41); cast (not caste), family (Falkner, 1935, p. 114)—all words denoting or connoting kinship proper. Apart from honorific adoption of nonkin into a kuga with imposition of a kuga name on the adoptee, as is recorded by Havestadt (1883, 1:399; 2:641; cf. Smith, 1855, pp. 260–62) in the case of some of the missionaries and Colonial civil officers, there is no tangible evidence in our sources that any but real kin were members of any given kuga, and consequently no evidence that the kuga constituted a true sib.

Each kuga had its own name, such as sky, sun, pillán (cf. infra under Religion, p. 747), stone, grove, likan pebble, sea or lake, gold, bird of prey, eagle, river, water, duck, rhea, tiger, paηke, llaηka, condor, snake, mountain ridge, bone, foot, lion, etc., to enumerate some of them in their order of frequency in the early documents as calculated by Latcham (1922 b, p. 311). Male children shortly after birth were usually given a name compounded of the kuga name, and a qualifying adjective, numeral, or other word, more commonly prefixed to the kuga name. The father gave the name in most cases in the following manner: If, e.g., he were of the llama kuga, he would call his sons according to circumstances, "white llama," "black llama," "running llama," "woodland shade" (where llamas rest in summer), etc. (Havestadt, 1883, 2:641).

According to Havestadt (1883, 2:641), sons derived their kuga name from their father's kuga. Félix José (1907, p. 6) states that in old baptismal registers son and father often have different names, but adds that in the family names of the two one notes the same cúnga [=kuga]. Latcham, however, (1922 b. pp. 323–25) states that his own comparisons of names of men and their sons appearing in published and unpublished sources show disagreement in the kuga element of the names; whence he concluded that sons must have derived their names from their mother's kuga. According to Carvallo i Goyeneche (1876, p. 139), the first-born son was given his grandfather's name. This problem of paternal versus maternal derivation of the kuga name needs further study from the published and unpublished sources. Félix José (1907, p. 38) and Guevara Silva (1929, 1:340) affirm that women did not have the family name in their names. (Cf. Rosales, 1877–78, 1:166; Havestadt, 1883, 2:641—neither very clear on this point.)

Members of a given kuga had particular regard for and loyalty to one another, and sided with and aided one another in quarrels and other affairs.

The relation of the kuga eponym to the kuga members is not clear. According to Rosales (1877–78, 1:5), many "linages" had the names of whales, etc., from sexual commerce of people turned into whales, etc., at the time of the mythical deluge, with women gathering seafood. According to Falkner, the eponym was believed to "preside over one particular cast or family of Indians, of which he is supposed to have been the creator," and at death the souls of the members of the cast went to live with its eponym (1935, p. 114).

Kinship behavior.—On specific rights, obligations, and forms of behavior among members of kinship groups, our sources give only meager details. (Cf. supra under Marriage and Family and infra under Life Cycle.) One point stands out: The relationship, according to Havestadt (1883, 2:704), which was of greatest esteem was the llopu one between maternal uncle and maternal nephew; the former had to give his daughters to the latter in marriage; the latter had to help his maternal uncle in all things. There is no record of institutionalized joking relationship among kin.

Kinship terminology.—The kinship terminology of the *Mapuche-Huilliche* is extremely complex. It is of the Omaha type (cf. supra under Marriage) insofar as a man calls his mother's brother's daughter "mother," and she calls him "son," and in some other respects (Hallowell, 1943). It is made up predominantly, though not exclusively, of reciprocal terms. It is in large measure classificatory. There has occurred considerable change of terminology since the first decade of the 17th century, as evidenced by comparison of Luis de Valdivia's (1887) list of 1606 and Febrés' (1882) of 1765, and Havestadt's (1883) of 1777 with Guevara Silva's (1904, pp. 24–27; 1908, pp. 64–66; 1913, pp. 191–94) and Félix José's (1916).

SOCIOPOLITICAL CULTURE

Political structure.—Our sources are so vague and often so conflicting as regards so much of the sociopolitical structure of the *Mapúche-Huilliche* that it is impossible to reconstruct therefrom a full, rounded, and consistent picture.

Some major features of the system, however, are quite clear. There was no peacetime over-all chief, no centralization of authority for all the *Mapuche-Huilliche* in any one individual or administrative body. Furthermore, such authority as was vested in kinship heads and local "chiefs" was very limited—exclusively or almost exclusively consultative and persuasive, with little or no coercive power. They had no recognized right to inflict punishment, to claim tribute or personal service, or to demand obedience from their kinsfolk or "subjects." The latter paid no attention to them and did as they pleased if the leaders showed themselves arrogant or domineering. Headmen or "chiefs" sent their messages through heralds (werken) chosen for dependability and for accuracy of memory (Guevara Silva, 1908, pp 370–74).

Supreme military commanders in important campaigns or in general uprisings against the Spaniards were usually elected in open assembly by choice of the leaders, but kinship heads and other "chiefs" were as a general rule hereditary. On the death of such a kinship head or "chief," his eldest or most capable son ordinarily succeeded him. If the oldest son was a minor, the deceased father's brother or nearest male relative assumed the office until the son grew up. If the deceased left no male offspring, the office went to one of the nearest consanguineal or affinal kin. In some cases, where the heir was unfit or incompetent, some other man would assume the office.

Decisions regarding peacetime affairs and warlike undertakings were usually made in conferences of the responsible men and subheads at the house or meeting-ground of the head or "chief" after free expression of views and by common agreement. There was a certain loose hierarchy of honor and status (rather than of authority proper) embracing higher and lower heads and "chiefs"—which brings us to the less clear features of the *Mapuche-Huilliche* sociopolitical structure.

The largest geographical division among the *Mapuche-Huilliche* was the vutanmapu (? + country). Three such divisions were recognized in earlier times, constituting longitudinal strips along the Coast, the central valley, and the sub-Andine region, respectively, from the Bío-Bío River to the Toltén River; to which were later added a fourth embracing the *Huilliche* country south of the Toltén to lat. 42° S., and a fifth, the Andean Cordillera region. These great divisions functioned chiefly, it would seem, in times of war.

The next smaller division was the aillarewe (nine + rewe), of which there were, according to Latcham's tabulation (1922 b, pp. 839–46), 50 or 51 south of the Itata River, and exclusive of Chiloé. The aillarewe was made up of a number of smaller groups, usually nine but sometimes more or fewer, generally called levo in the earliest sources, and rewe (regua) in the later ones. The levo or rewe was in turn made up of a small number of caví (cabí), and each of these latter in turn, at least in the south, of several machulla (müchulla) or pichicavi (small + caví). The foregoing was the more common, but not invariable, division and terminology.

Data on the size of these respective subdivisions are very fragmentary. According to Mariño de Lovera (1865, p. 140), each caví in the Valdivia area had 400 "indios," with each component machulla consisting of "pocos indios." Latcham (1922 b, pp. 383–84) estimated the population of the levo (or rewe) to have been from about 1,600 to 4,000.

Our sources are fairly clear that each machulla, caví, and levo (rewe) had some sort of headman. (Mariño de Lovera, 1865, p. 140; Olaverria, 1852, p. 22; Bascuñan, 1863, p. 187.) These headmen whose office was, as above noted, usually hereditary, functioned in normal times, in contrast to the leaders of the larger divisions, who earlier appear to have been mostly elected, and elected predominantly for the conduct of war. Such normal-time headmen and wartime leaders were variously known as loηko, toki, rewe, ül·men—titles applied by our earlier sources with little consistency. In general, the title of loηko (head) seems to have been given more to headmen of lower and smaller subdivisions, toki (ax) to headmen of rewes or of higher subdivisions. The title of ül·men means literally "noble, rich person" rather than headman; not all headmen were ül·mens, and vice versa.

Vertical relationships in the political hierarchy are not clearly defined in our sources. According to one witness (cited by Latcham, 1922 b, p. 363), no one caví was subject to any other caví; according to Mariño de Lovera (1865, p. 140), the heads of the machullas were subject to the head of the cabí which the machullas constituted. Given the general democratic decentralized pattern of *Mapuche-Huilliche* political life, we may be reasonably confident that such "subjection" of smaller to larger unit in the political hierarchy as may have existed must have been close to purely nominal.

Each small "farming community" of three to seven or more huts (cf. supra under Settlements) had its own headman, a richer or older man or a descendant of caciques. (Ascasubi, 1846, p. 355; cf. Mariño de Lovera, 1865, pp. 124, 140.) Luis de Valdivia (1887, s. v.) defined cúḡa (kuga) not only as a lineage and as the name thereof, but also as "la cabeça de parientes, el que es como cacique, e indio principal." Rosales (1877–78, 1:137) states that the "caciques," who with the "toquies" are the only persons of dignity, were "las cabezas de las familias y linajes, de modo que no tiene un cacique que le reconozca mas de los de su linage." How and where these headmen of farming communities and heads of families or kinship groups fitted into the political hierarchy above outlined is not clear from our sources. The facts we have seem best explained on the provisional hypothesis that the small farming communities, and perhaps clusters of such communities, constituting machullas and cavís respectively, were exclusively or preponderantly made up of closely related kin.

In the course of time, particularly after the beginning of the 19th century, a certain increase of executive and judicial power and authority accrued to peacetime headmen of the different ranks, and the earlier atomistic peacetime political structure assumed somewhat greater unity, cohesion, and hierarchization. But the basic democratic forms and functions persisted largely intact. (For military organization, see infra under Warfare.)

Law and legal procedure.—The chief crimes recognized were adultery and wife-stealing, murder, theft, homicidal sorcery, and treason. The offended party and his kin dealt with the offender; in earlier times, headmen and other caciques had little or no authority to try cases or to pronounce judgment. Adultery, murder, and sorcery were punishable by death, and sometimes were actually so punished; but, more commonly, in cases of adultery and murder, composition was resorted to, with payment of strings of llaŋkas, 10 such strings for one death. Marcgrav (1648, p. 287) states that the sorcerer was burnt alive—as is also recorded among the Argentine *Araucanians* by Barbará (1930, p. 44). (Cf. similar *Chiriguano* treatment of sorcerers, and Molina, 1901, p. 154, on torture of sorcerers to force revelation of accomplices. For fuller details on law and judicial procedure, cf., e. g., Guevara Silva, 1904, pp. 40–59.)

Nonpolitical social grouping.—The modern *Mapuche-Huilliche* are divided into three loosely separated classes: the wealthy, the unattached commoners, and the poorer people working as peons on estates. Earlier, too, there was a similar loose triple division into: wealthy and caciques, commoners, and "slaves" and captives.

Personal rank and prestige was derived chiefly from martial prowess and from wealth; generous hospitality, and eloquence in speech were other well-recognized avenues to status.

There were no secret or other societies, and no formal organization of age classes. There is no tangible evidence of moieties; the term llaúcahuin, "la mitad de una regua," given by Luis de Valdivia (1887, s.v.) in his vocabulary, hardly constitutes such evidence, problematic though the meaning of the term be. There existed a type of "blood-brotherhood" (koncho), entered into by two men with a ceremonial giving and/or killing of a lamb or other animal (Félix José, 1916, 1:93, s.v. koncho; Moesbach, 1936, pp. 389–91). Other kinds of "brotherhood" were entered into between two men, two women, or a man and woman by drinking or eating together or by exchanging presents, and between two families or tribes by the more solemn ritual killing of a lamb and eating it together and by offering prayers. (Housse, 1939, p. 208–10; cf. Guevara Silva, 1908, p. 66; Havestadt, 1883, 2:691; Smith, 1855, pp. 260–62.)

ECONOMIC LIFE

Ownership.—Our earliest specific, albeit meager, information on land tenure is from the second half of the 18th century (Molina, 1901, pp. 122, 149; Gómez de Vidaurre, 1889, 14:341); later writers have added a little but not much. (Smith, 1855, pp. 240–41; Ruíz Aldea, 1902, pp. 15, 30; Guevara Silva, 1904, pp. 38–39; Bullock, 1911, p. 3; Latcham, 1922 b, pp. 412–13; Moesbach, 1936, p. 192; McBride, 1936, pp. 308–09.) If we piece together the scanty and incomplete data available, the following outlines emerge, though none too clearly: Each family or close-kinship group claimed a given territory which had been passed on to it from its ancestors, this territory being held jointly or communally by the family or group. Land not under actual cultivation or lying temporarily fallow was communally held. Each individual—or family—had exclusive rights of use to the land claimed as fallow or under cultivation by him, and to its products, and could transmit such land to his heir or heirs. According to Smith (1855, p. 241), only the headman could dispose by sale or otherwise of clan land to Indians who were not members of the community, but all selling of land to Whites was a capital crime. Each wife in polygynous households received her own garden plot from the husband (Ruíz Aldea, 1902, p. 30; cf. Moesbach, 1936, p. 192), and kept separately the products thereof; in addition, she owned her own chickens and livestock, which as a rule were not, or could not by right be, sold by her husband without her consent (Moesbach, ibid.). There is no trace among the *Araucanians* of the system of periodic allotment of gardening land that is found in some communities of the Highland of Bolivia and Perú and probably of the Piedmont of far northern Chile (McBride, 1936, pp. 309, 364).

Inheritance.—Here, too, information is late, meager, and lacking in detail. A man's property was inherited by his sons, according to Carvallo i Goyeneche (1876, p. 141). When an older man (father or other) was near death, all his blood kin came in together, and he distributed some of his property to each, and the residue to his children, or, if there were no children, to his brothers and other near blood kin (Havestadt, 1883, 2:621; Molina, 1901, p. 122). (On inheritance of wives, see supra under Marriage and Family.)

Exchange.—Barter by exchange of presents was common—the donor giving with the expectation of a return from the recipient. (Febrés, 1882, s.v. thùiln; Havestadt, 1883, pp. 616–17; Smith, 1855, pp. 258, 292.) Havestadt states (1883, 2:700) that llancas (llaŋkas) were used to purchase necessities as well as to compensate for murders, and Molina (1901, p. 184) reports a sort of conventional tariff of "payments" (kullin) consisting of a horse or bridle as "one payment," an ox as "two payments," etc, but a more specific currency was absent. Some plain barter, but not so much, was carried on by the *Mapuche-Huilliche* among themselves. They carried on a considerable "foreign" trade with, e.g., the *Puelche* for salt, bezoars, feathers, etc.; with the Spanish, selling ponchos and livestock for wine and miscellaneous merchandise. There were no established markets or market days, although Mariño de Lovera (1865, p. 124) states that the "public gardens," that is, the open grounds set aside and used for assemblies and feasts, served as places for buying and selling goods and women—incidentally, no doubt, to civic or social gatherings therein.

Labor.—Some kinds of work, such as constructing houses and sowing and harvesting, were done by voluntary communal or group labor. The individual would invite his kin and neighbors to help. No payment was made to them for their labor, but at the end he would usually provide a good feast with plenty of chicha, and he in turn would, of course, be expected to help when one of them had similar need.

To the man fell the tasks of felling trees and clearing the ground for gardens, attending cattle and horses, hunting, cutting wood, all woodworking, constructing huts, corrals and other enclosures, fishing and navigating, carrying on military activities, and making weapons and tools. The woman's work included cultivating the garden, preparing and cooking food, making fermented beverages, caring for the younger children, collecting wild plant foods, spinning, weaving of blankets and clothing, skin dressing, making pottery, and weaving basketry.

Some traces of sporadic drudgery labor by captives taken in warfare or raids appear, but slavery as a developed permanent institution can hardly be said to have been present. The *Mapuche-Huilliche* served at times as middlemen in slave trading with the Spaniards.

ETIQUETTE

It was de rigueur for a visitor, guest, or official messenger to carry out with his host a long series of more or less formalized questions, answers, comments, and compliments, before business or general conversation opened. A guest was supposed to eat all the food set before him. The common salutation on meeting was "mari mari." The weeping salutation between kin and friends, on the return, for instance, from a journey, is recorded by Guevara Silva (1908, p. 63). It was impolite to interrupt a person who was talking, or to pass directly in front of him or to pass between two people conversing without apologizing. One of the most common courtesies was to drink toasts to friends, sharing the drink with them. Before entering a hut, the visitor was supposed to knock; he entered only after an invitation to enter was received from the head of the house.

Among the many common insulting terms were "ghost," "dog," "toad," and, worst of all, "sorcerer." (Havestadt, 1883, 1:398; cf. L. de Valdivia, 1887, s. v. goyde; Guevara Silva, 1898, 1:221; fuller list, including many grosser insults, in Guevara Silva, 1911, pp. 50–56.)

Hospitality was always given to friend and stranger, as a recognized custom.

In more recent times at least, one of the highest courtesies or honors that could be conferred was the awün (awn), which consisted of riding around a person whom the group wished to honor and of shouting at the same time. (See also table etiquette supra under Eating p. 706).

Personal cleanliness was cultivated through daily bathing in the rivers or streams, even in wintertime, a custom indulged in also by the women and having for both young and old the further purpose of preserving health and strengthening the body. The *Mapuche-Huilliche* were excellent swimmers and divers. The bark of kəllai (quillay, *Quillaja saponaria*) was used in place of soap to wash the hair. Nevertheless, lice were abundant, a common method of disposing of them being that of killing them with the hands or teeth and eating them. Considerable efforts were also made to keep huts and cooking utensils clean.

WARFARE

Warfare in the sense of feuds and battles between *Araucanian* groups themselves was common, to carry out raids and to settle quarrels; not, however, to extend territory. Most of our information, however, concerns warfare as carried on between the *Araucanians* and the Spaniards.

Preparation for war.—The first step toward deciding upon war was usually the sending, by a headman or group, of a messenger to headmen and groups desired as confederates. The messenger carried an arrow tied with a red string, symbolic of blood, or, if hostilities had already begun, with the finger of a slain enemy attached to the arrow. He also carried a quipu for each headman or group, to indicate the day of assembly. When all had assembled on the appointed day, a black llama was killed and the arrows and spears were dipped in or anointed with the animal's blood, while all of the headmen ate a bit of the heart of the animal as a pledge of unified purpose. The war decision was made by general agreement. A leader was chosen by preference from among the existing headmen or prominent warriors. His authority was considerable but lasted only so long as war lasted. His mark of office was the toki, the name by which he himself was called. In the later 18th century, at least, the toki-ax was kept in hiding during peacetime and brought out in time of war. The fighting men before going to war shaved their heads, leaving only a circle of hair, abstained from sex relations, and ate and drank sparingly for 8 days before starting out.

Tactics and weapons.—As early as 1568, the *Araucanians* had begun to use cavalry in battle on a fairly large scale; later, they used it much more frequently. In battle formation, the infantry advanced in the center and the cavalry on the wings. The use of advance guards, sentinels at night, trenches protected with thorn branches, pitfalls and ditches with sharp stakes at the bottom, spies and fifth-column work, and log forts and palisades was common. Each warrior carried with him a small bag of parched meal which, with salt and ají, constituted his food. A common war cry was to strike the open mouth rhythmically with the palm of the hand while shouting and to repeat this four times (Moesbach, 1936, p. 126).

Infantry weapons were chiefly the following: Bows and arrows, spears, clubs, and slings. The spears were 20, 30, or more palms long (circa 14 to 20 feet), with fire-hardened or stone points. Spears were sometimes thrown as javelins (Frézier, 1716, p. 58; cf. "gorguz," *in* Ercilla, canto 25, 1910, p. 415, and Oña, canto 6, 1917, p. 225). The bow was short, according to González de Nájera (1889, p. 95, 5 palmos) with sinew string; the arrows, according to González de Nájera (ibid., pp. 95-96), about 2½ palmos long, of cane, usually with bone heads, not poisoned but lightly attached to the shaft and apt to come off in the wound, were carried in a quiver. The clubs were of two kinds, a very long two-handed elbow club of heavy wood, about 15 palmos long, according to González de Nájera (1889, p. 96); and another type of knobbed or spiked club. The sling was used earlier and also the atlatl. (Cardenas, 1846, p. 43; cf. Mariño de Lovera, 1865, pp. 117, 372; cf. also Oña, canto 6, 1917, p. 225.) Góngora Marmolejo (1862, pp. 47–48) mentions a sort of pole snare used on one occasion to drag horsemen out of their saddle. Flint axes were also used at times. The ordinary and chief weapon of the cavalry was the very long lance, later headed with a metal point; swords were used when available. Defensive armor—pre-Hispanic, since it was reported in use at very first contact by Pedro de Valdivia—consisted of helmets and coats of thick sealskin, cowhide, or whalebone, together with thick skin shields. Long before the close of the 16th century, the *Araucanians* were beginning to use firearms.

Victory celebration and treatment of prisoners.—War captives bebelonged to the captor; booty, to him who first seized the loot. Sometimes captives were adopted into the tribe or kept as drudge slaves. The common practice was to put them to death, frequently with torture and special rites. The heads of battle victims were cut off and carried back on spears.

The victory celebration was held in an open field, with a canelo tree (*Drimys winteri*) in the middle thereof. The men, clothed in the skins of wild beasts dressed with the head left on, or in capes covered with feathers, danced round the tree; women also took part in the dance. Captives might be flayed alive or tortured in other ways. (See infra under Cannibalism, p. 732.) One distinctive rite first reported in 1629 by Bascuñan (1863, pp. 39–44; cf. Rosales, 1877–78, 1:125; Olivares, 1864, pp. 47–48; Molina, 1901, pp. 165–66; Carvallo i Goyeneche, 1876, pp. 144–45), and last reported in 1828 by Poeppig (1835–36, 1:389–90, for the "*Pehuenche*" near Antuco), was as follows: One or more small holes were made in the ground; the captive was given a stick or bits of stick and told to put these bits one by one into the holes, pronouncing with each bit the name of one of his compatriot prominent warriors or relating one of his own war deeds; as he threw in the last piece, he was struck over the head with a heavy club or was pierced with lances, and so despatched.

After the death of the captive his heart was ripped out and sucked or bitten into by the assembled headmen; from his skull, a drinking cup was made; from his long bones, flutes; and from the hard dried skin of his hands, rattles. Sometimes masks were made of the dried and molded faces of killed captives and worn like the animal skins mentioned above. The victory celebration ended with the killing of an animal, with hard stamping on the ground, singing, and dancing around the heads of the enemies stuck up on spears, and with elaborate feasting and heavy drinking.

Peace rites.—A peace messenger with a canelo branch, the symbol of peace, was sent, and those coming to the council carried branches of the same. The usual speeches were made and agreements concurred in. A white llama was killed, and each headman present consumed a bit of the heart while the canelos were anointed with the blood of the llama. A hole was dug in the ground and therein were buried arrows, tokis, and other instruments of war. The hole was then filled up and a canelo planted over it.

CANNIBALISM

From the accounts left us by González de Nájera (1889, pp. 54, 56), Bascuñan (1863, p. 43), Rosales (1877–78, 1:125), and others, there can be no reasonable doubt that a certain amount of cannibalism in connection with the killing of war prisoners was practiced by the *Araucanians*. As to the purpose, our sources are not clear; magical acquisition of power does not seem indicated. In some cases the captors cut flesh off the living captive, broiled it, and ate it; in other cases they burnt the bones of captives, reduced them to powder, and drank the powder mixed with lime; in still other cases the more common custom, the heart of the captive was cut out, sucked, and bitten into by the headmen and sometimes by others as well, or was cut up into small bits and each ate a bit—as was the common custom with the hearts of sacrificed animals.

Some of our early sources—Oña (canto 2, 1917, p. 86), Fernández (1611, cited by Medina, 1882, p. 217) and Molina (1878 a, p. 253; 1901, p. 165)—mention human sacrifice proper among the *Araucanians*, but without giving convincing evidence or details. There is a greater probability that it did not occur. (For summary and discussion of evidence, cf. McClafferty, 1932, pp. 27–29.)

LIFE CYCLE

Birth.—It was taboo for an expectant mother to stand on the threshold of the hut. To give birth within the family hut was thought to bring evil upon the inmates. When travail began, the woman, accompanied by a relative or friend as midwife, retired to a temporary shelter near a stream or the sea. Delivery was in kneeling position. Midwives showed considerable skill in cases of difficult delivery, and practiced cephalotomy when they thought it indicated (Claude Joseph, 1933–34, p. 713). The umbilical cord was ordinarily cut with a flint knife (Latcham, 1922 b, p. 561). Various plant medicines were used to facilitate delivery; also, recently at least, a decoction of *Datura stramonium* to deaden the pains; and during and for a while after delivery, the mother took no cold drink (Gusinde, 1936, pp. 561, 855, and passim).

The mother bathed the infant and herself in a stream or in the sea right after birth. After remaining in seclusion 8 days, or in some cases less, she returned with the child for the naming feast. At this feast, in more recent times at least, a white lamb was sacrificed, some of its blood sprinkled in the four cardinal directions, and the rest poured into a hole in the ground where the severed umbilical cord was deposited. South of Toltén, a tree was planted at the name-giving feast of a male child. The name of a female child could not be mentioned lest she die. (On kuga names, see supra under Kinship, p. 723.)

Two types of cradle were used (fig. 78): a portable one, of two longitudinal arms connected with boards or else a netted frame, with bow; and a swinging "hammock" type (illustrated in: Smith, 1855, p. 213; Latcham, 1909, pls. 34–35; cf. Moesbach, 1936, pp. 186–88 for description).

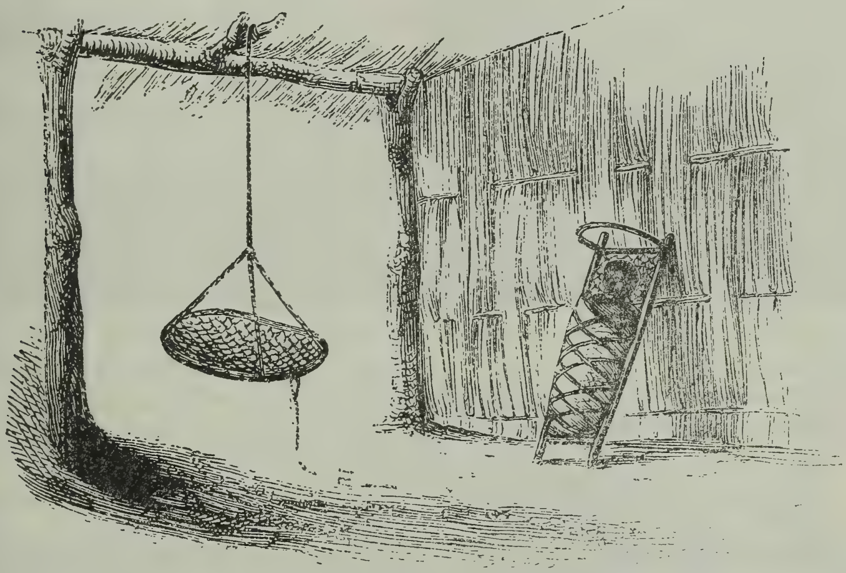


Figure 78.—*Mapuche* cradles. (After Smith, 1855, p. 213.)

After childbirth, cohabitation of husband with wife was not resumed until weaning, which did not take place until all the child's teeth were cut (Latcham, 1909, p. 360), or until a year after birth or, if the child was weak, 18 months or more (Claude Joseph, 1933–34, p. 713).

Both abortion and infanticide occurred, but how commonly is not clear. Gusinde (1936, passim) lists about a dozen different plant abortifacients. Deformed offspring and one of twins were done away with, by being thrown into the water or suffocated with mud (Guevara Silva, 1929, 2:241–42; 1908, p. 222). Félix José (1916, 1:91) lists the verb koftun, meaning to kill an infant and roast its testicles in a heated pot, as done sometimes by an unmarried mother to avenge herself on her unfaithful lover—so making him impotent (Guevara Silva, 1908, p. 222; 1929, 2:242). The present writer has come across no specific mention of contraceptive practices; apparently in recent times they were disapproved, to judge from a somewhat vague reference in Housse (1939, p. 249).

Education.—Two poles 10 to 13 feet (3 to 4 m.) long attached horizontally and parallel about 1 foot (30 cm.) apart to four upright stakes about 2 feet (0.5 m.) high were used as a device to help the infant learn to walk (Claude Joseph, 1933–34, p. 714). As means of physical hardening, boys had to sleep and eat outside the hut, to bathe daily from infancy, to abstain from meat, fish, and salt, and to eat chiefly grain and "light" foods; their legs and feet were scarified to help them run swiftly. (Rosales, 1877–78, 1:118, 167; Manquilef, 1914, pp. 263–64; Gusinde, 1916–17, pp. 205–13.) They were early trained to arms, swimming, and horsemanship. They were rarely chastised, lest they should grow up base and cowardly, and they were praised for insolence. They accompanied their fathers to drinking feasts, and the latter were well pleased with their sons' drinking and amours thereat (Olivares, 1864, p. 61).

In more recent times at least, beginning with his 7th year, a boy was given counsel and instruction every evening by his grandfather; at the age of about 11 he had to make a formal visit to the cacique to give proof of his knowledge of etiquette; and at the age of 16 to give a demonstration of his oratorical ability (Claude Joseph, 1933–34, pp. 1055–56). Stories with a moral were used to educate children (Housse, 1939, pp. 267–78). In recent times too, ground *Datura stramonium* seeds were fed to disobedient and incorrigible children to mildly narcotize them, in which state they were then lectured (Gusinde, 1936, p. 855).

No puberty rites or observances proper are reported for either boys or girls. (Cf., however, infra, Argentine *Araucanians*, p. 757.)

Death and burial.—If we may take our sources literally, death in all cases, even from accident or old age, was attributed to other than natural causes, viz., to sorcery or to evil spirits excepting only death from wounds. Suicide occurred but was not common: Bascuñan (1863, p. 70) mentions warriors captured by Spaniards, and Moesbach (1936, p. 241) girls forced to marry against their wills, as having sometimes resorted to it.

The rites and observances connected with death and mourning were complex and differed somewhat according to period, to region, and to rank, status, sex, and age of the deceased. The chief ones, not all of them carried out in all cases, were the following: Repeated ceremonial wailing; tearing out of hair by females, and sometimes (Bascuñan, 1863, p. 187) rending of clothing; circling the corpse afoot or on horseback with great clamor (the awn, or awün rite) to honor the deceased, and also, it appears, to drive away evil spirits and to prevent sorcerers from capturing for evil purposes the soul of the deceased; calling in the shaman to discover, through examination of

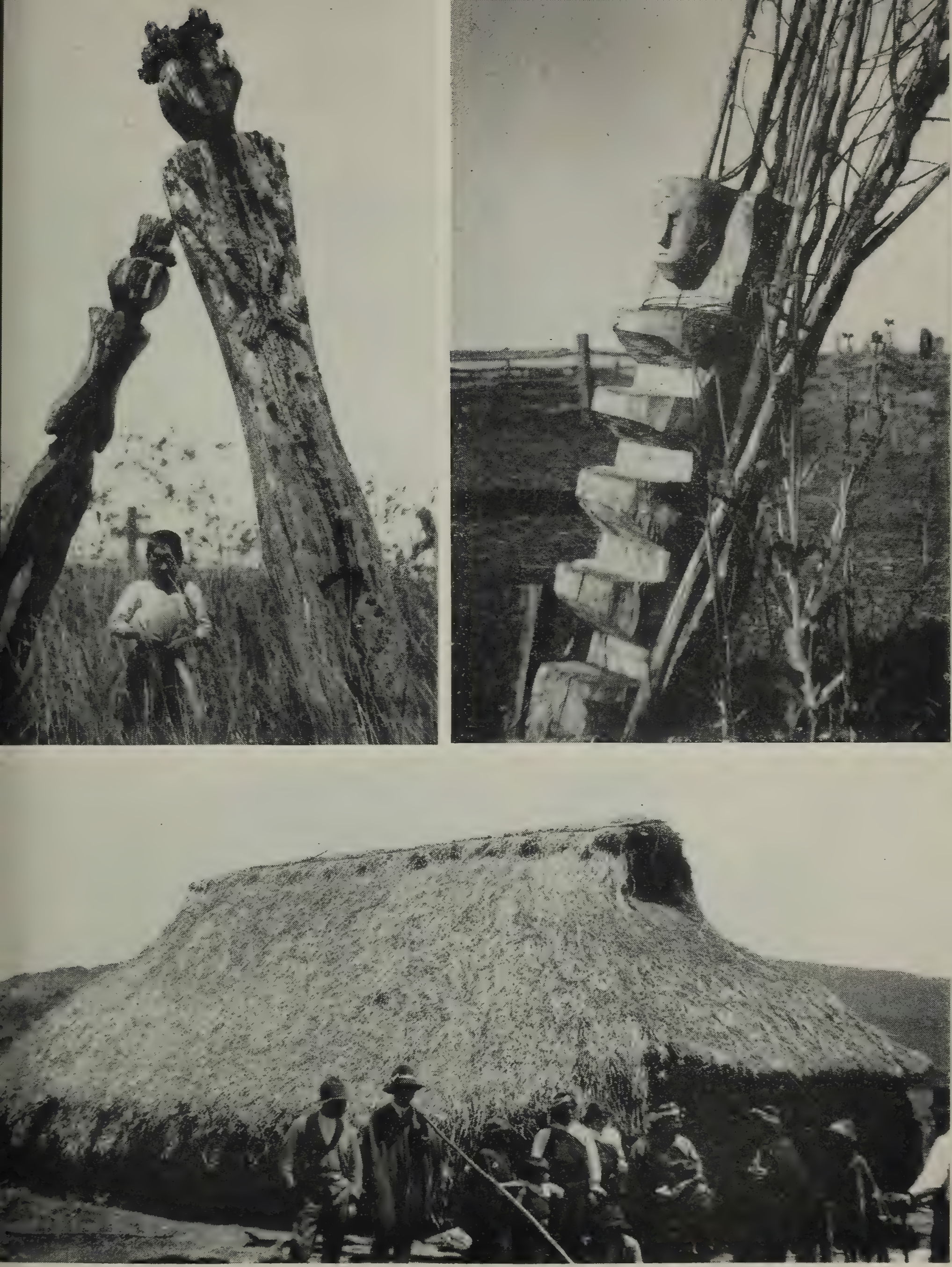


PLATE 153.—**Araucanian graves, rewe, and dwelling.** *Top* (*left*): Grave posts. *Top* (*right*): Rewe, or machi's ladder. *Bottom: Mapuche* dwelling, or ruka. (Courtesy University Museum, Philadelphia.)

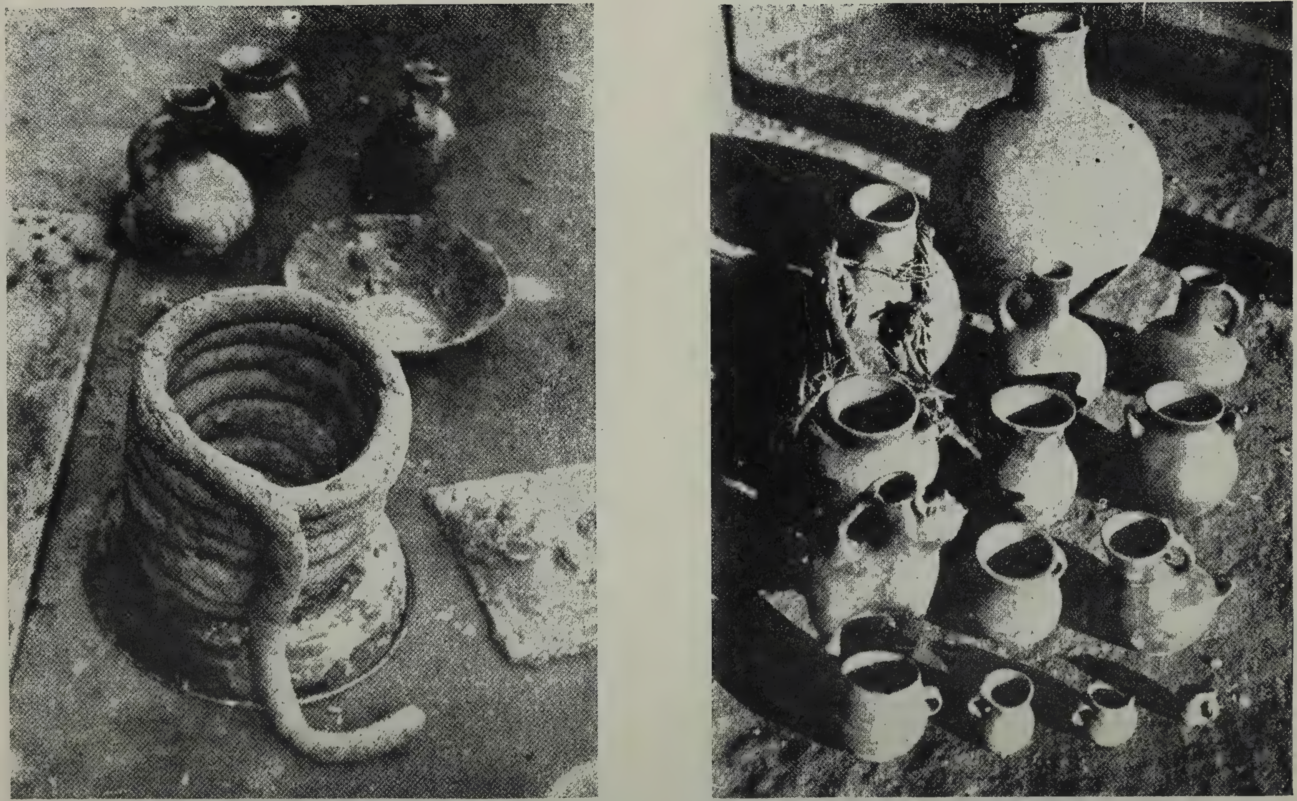


Plate 154.—**Araucanian pottery.** *Left: Mapuche* coiling technique in pottery making. *Right:* Types of modern *Mapuche* pottery. (After Claude Joseph, 1931, figs. 16, 20.)

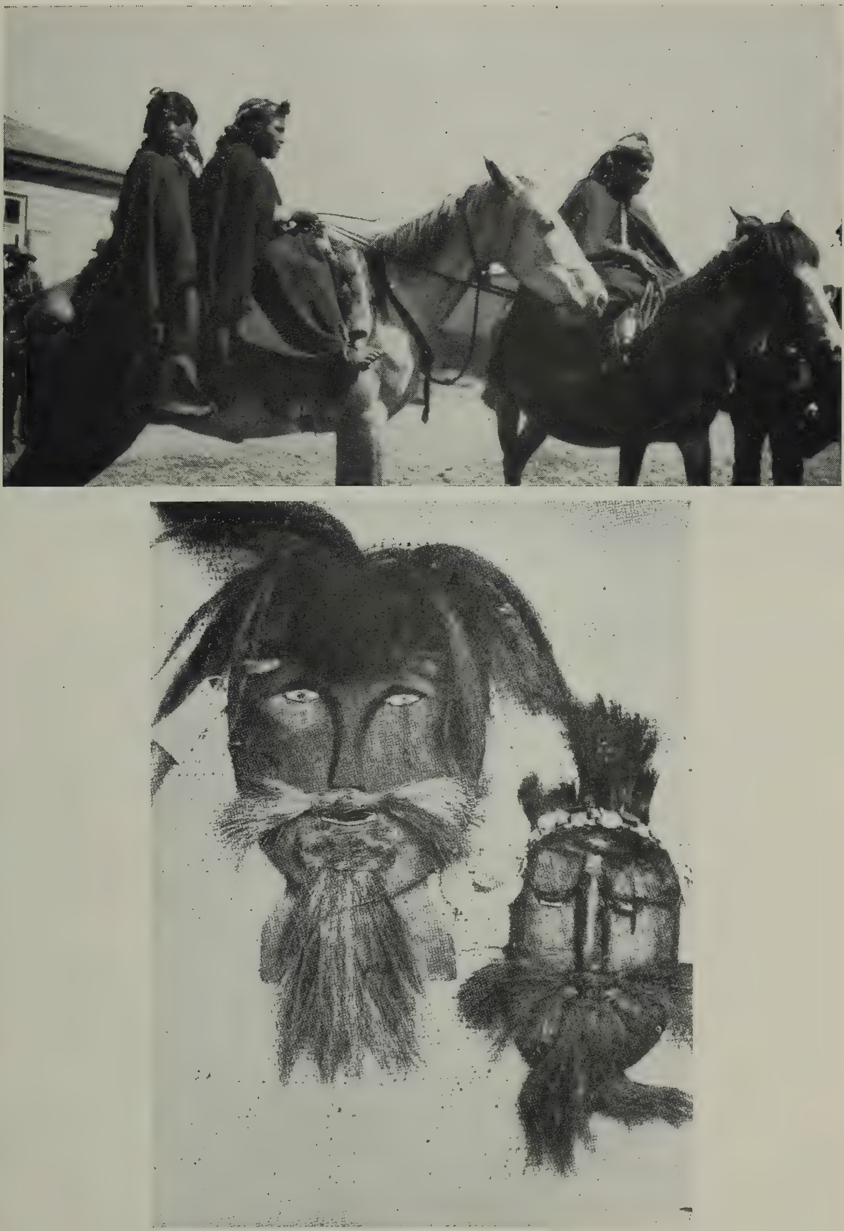


Plate 155.—**Araucanian Indians and Araucanian masks.** *Top:* Mounted *Araucanians.* (Courtesy University Museum, Philadelphia.) *Bottom:* Modern *Mapuche* masks. (After Claude Joseph, 1931, fig. 29.)

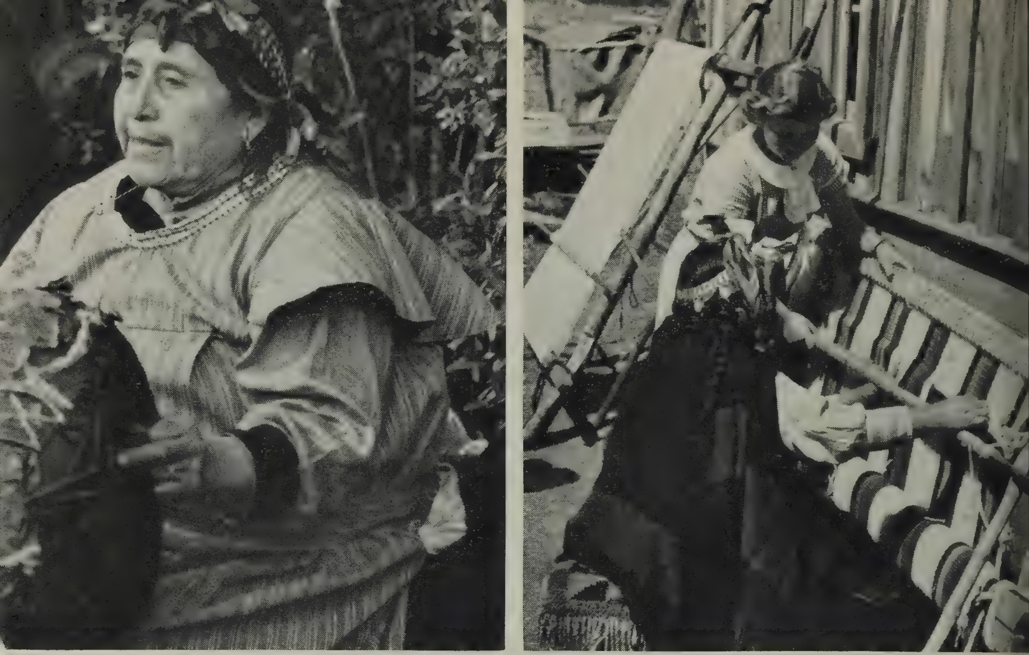
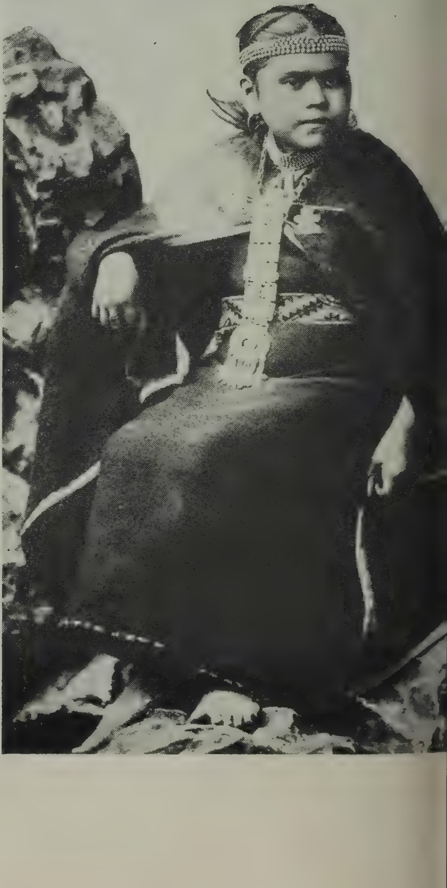


Plate 156.—**Araucanian Indians.** *Top (left): Mapuche* female shaman. *Top (right): Mapuche* woman weaving. (Courtesy Grace Line.) Bottom: *Mapuche* girl. (After Looser, 1927, opp. p. 3.)



blood specimens or of the gall bladder of the dead person, the human or supernatural agent that caused the death; extracting the viscera and smoking the body on a frame with a fire of the sacred *Drimys winteri* wood, which gives dense fumes; keeping the body on this frame or on a bier for a considerable time, even 2, 3, or more months until everything—coffin, chicha, food, gifts—could be gotten ready for the burial; visiting by relatives and friends who brought gifts, including chicha, drank toasts to the dead, and placed the gifts around the body; making of chicha libations and lustrations; much feasting and chicha drinking by relatives and friends; and washing the body and dressing it in new clothes.

Each family or lineage had its own burial ground near the dwelling, in a grove or on a hill, to which the body was carried in procession, on a stretcher or in the coffin. The coffin, at least for prominent men, was ordinarily a log hewn hollow in dugout-canoe shape, covered with a similar inverted dugout or heavy planking; in more recent times, a plank box. Burial, in modern times in a dug grave, was formerly as a rule on the surface. Adornments and belongings, according to the sex of the deceased, were deposited in and/or around the coffin, and it was covered with a mound of earth or rocks. An alternative method, reported by González de Nájera (1889, p. 50) for caciques, was to place the covered dugout coffin up from the ground, wedged in trees or resting on heavy forked posts.

Since as early at least as the second half of the 18th century (Carvallo i Goyeneche, 1876, p. 140; McClafferty, 1932, pp. 47-48), horses were killed over the grave of a man, and, at least for more prominent men, a horse skin was hung up at the grave over a transverse pole resting on two forked poles (fig. 79, from Smith, 1855, p. 172), and a lance with an attached banderole implanted upright in the ground. In the *Huilliche* country, graves were sometimes surrounded with a sort of fence made of roughly hewn boards (fig. 80) and posts crudely carved in human form were set up (pl. 153, *top, left*) (Smith, 1855, p. 309; Moesbach, 1936, p. 405).

There is no ethnological or archeological evidence of cremation of corpses, apart from the practice of burning the bodies of warriors killed in battle far from home and of transporting the ashes back for burial (Rosales, 1877–78, 1:163). There is archeological evidence of both cist and urn burial in *Mapuche-Huilliche* territory (Latcham, 1915 b, pp. 211–12, 235; 1922 b, pp. 765–66; 1928 b, pp. 206–7, figs. 5–6), but no historic record of such burial among the *Mapuche-Huilliche*.

In some cases simple anniversary rites occurred. It was not permissible to mention the name of a deceased person. (For fuller details on burial customs, cf. Latcham, 1915 b, pp. 272–300.)

Concept of soul and future life.—The human soul or spirit was called pəllü (pallí, pulli), am, alwe, loliñ, aiwiñ. Such differences of meaning as the respective words may embody are not clearly deducible from vocabulary definitions, explanations, or contexts. The last four appear to denote the soul or spirit of the deceased. In Febrés (1882) and Havestadt (1883, 1:458), am also connotes a ghostly specter or apparition, for which, according to Latcham (1922 b, p. 581) pəllü is never used; nor is alwe ever used for the soul of a living human being. The primary literal meaning of aiwiñ is "shadow cast by an object." The soul separated from the body was also called sometimes pillan. There is no clear evidence in our original sources that the *Mapuche-Huilliche* believed men to have two or more "souls."

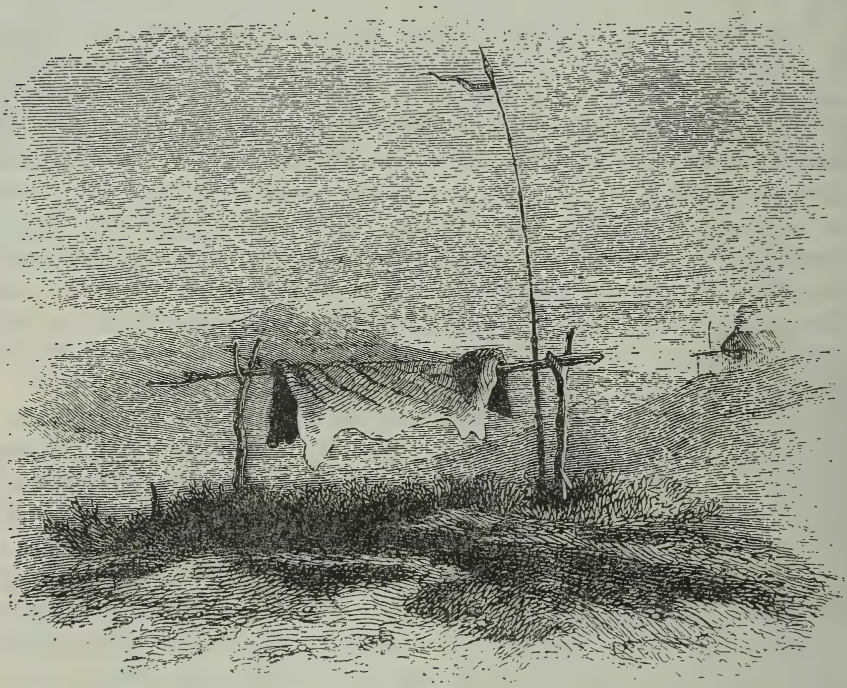


Figure 79.—*Mapuche* grave, with horse skin and mast. (After Smith, 1855, p. 172.)

In one version of future-life concepts, the departed spirits were transported to the abode of the dead by an old woman in the shape of a whale. Divergent beliefs localized the abode of the mass of dead in the Andean Cordillera, or to the west, or to the other side of the sea or ocean, or, more specifically, in the Island of Mocha. Their lot, according to one conception, was a contented one; according to another, not so good, insofar as their food was black potatoes. Our sources, both early and more recent, pretty consistently report that happiness or the reverse in the future life was not dependent upon moral behavior in this life; although, according to Molina (1901, p. 172), some natives thought it was, as some have thought more recently (Housse, 1939, p. 90). Other beliefs were that caciques after death dwelt in volcanos or in the stars or the Milky Way; sorcerers, in caves or in the depths of volcanos; warriors, in the sky. Storms, thunder, and lightning were, according to one tradition, caused by battles in the air, waged by the spirits of departed natives against the spirits of Spaniards. The spirits of dead caciques could revisit the living in the form of large blue flies.

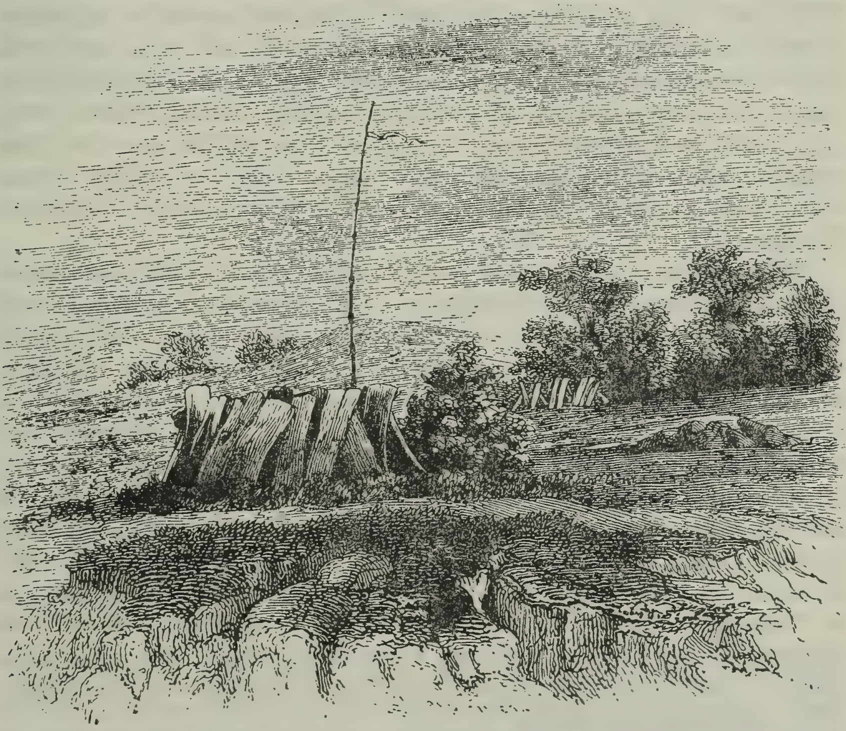


FIGURE 80.—*Mapuche* grave, with upright lance and fencing of roughhewn boards. (After Smith, 1855, p. 227.)

ESTHETIC AND RECREATIONAL ACTIVITIES

Art.—Design was confined almost exclusively to geometric patterns. There was no figure modeling in clay except the steamer-duck pitchers previously noted, no sculpture in stone, and no artistic wood carving, except certain crude wooden masks (collón: cf. Claude Joseph, 1931, pp. 234–36) used at gatherings and in hockey games and the rudely shaped human figures in wood set up at graves.

Literature.—Oratory was in high esteem, taught and cultivated, and premiated as an avenue to prestige and public office. A special highly figurative style prevailed in public speeches, with the use of special phrases and turns of expression peculiar thereto. Special songs were composed for important occasions. Improvisation of songs was common. The songs, with words, not wordless or predominantly wordless, filled with metaphorical and vivid language, dealt with subjects ranging from sex and war and religion to love of kin and friends, freedom, satire, death and bereavement, various frustrations, drinking, and other events of ordinary life. (For details on songs and singing, cf. Guevara Silva, 1911, pp. 119–21; for samples of songs: Guevara Silva, 1911, pp. 122–34; 1913, after p. 226, with musical notation; Félix José, 1910, many songs passim.) Besides the orators and song-composers, there were also what may be called the historians, who knew the ancient traditions, genealogies, and martial exploits of the past. The large number of proverbs current (Guevara Silva, 1911, pp. 15–95) and the distinctly aboriginal flavor of so many of them suggest native rather than Hispanic origin. The few riddles (Soustelle, 1938, pp. 76–77; cf. Félix José, 1916, 1:93, s. v. koneu) look more European

Music.—Songs were usually sung in a low voice to the accompaniment of the drum or other instrument. The chief musical instruments were: A kettle drum (kul·truŋ), a wooden plate or a half gourd, with a single head of skin, beaten with a small stick; a flute (pifəllka) of wood, and formerly of human longbones; a wind instrument (trutruka), 10 to 13 feet (3 to 4 m.) long of *Chusquea* sp., hollowed out, with a cattle horn at the end; a shell or cattlehorn trumpet (kulkul). The shamans used particularly a hand drum of the type just mentioned and a gourd rattle (wada). Izikowitz (1935, p. 121) figures a basketry rattle. Other less frequently mentioned musical instruments were: A drum of a tree trunk, a flute of *Chusquea* sp., a small sort of panpipe or "mouth organ" (Housse, 1939, p. 190), and the musical bow (Guevara Silva, 1898, 1:281–82; Félix José, 1916, 1:180; Izikowitz, 1935, p. 203) —the last, post-Columbian (Lehmann-Nitsche, 1908). The bull-roarer was absent.

Dances.—Men and women danced, but rarely together, and to the music of drum and flutes. The older dances were seemingly at a rather slow tempo, the dancers' feet being hardly lifted from the ground. The imitative ostrich, puma, and other dances appear to have been more modern, of introduction from across the Andes. Bascuñan (1863, p. 135) described one dance characterized by rather marked erotic elements, elements common in modern *Mapuche* dances (Guevara Silva, 1898, 1:285; 1908, p. 41; 1913, p. 229). In some of the modern *Mapuche* dances and gatherings there is considerable clowning (Félix José, 1910, pp. 45–46), and use of masks (pl. 155, *bottom*) of wood and of canelo leaves (Guevara Silva, 1898, 1:285; 1908, p. 128; Claude Joseph, 1931, pp. 234–36).

Recreation.—Perhaps the most important single recreational activity of the *Mapuche-Huilliche* was the kawiñ. This consisted primarily of a gathering or reunion of a small or large number of people, during which there was singing and dancing, feasting, and heavy drinking. The kawiñ was very apt to end in widespread intoxication among the participants, bloody fights, and sex orgies—in a word, the typical, widely distributed aboriginal South American drinking bout. These eating and drinking feasts were given on many occasions, such as religious rites, victory celebrations, the erection of a hut, sowing and threshing, shearing, the completing of a new receptacle for chicha making, marriages, burials, athletic events, initiation into the shamanship, etc. The war cry previously mentioned, made by striking the palm rhythmically against the mouth, was also a common sign of rejoicing used in such feasts.

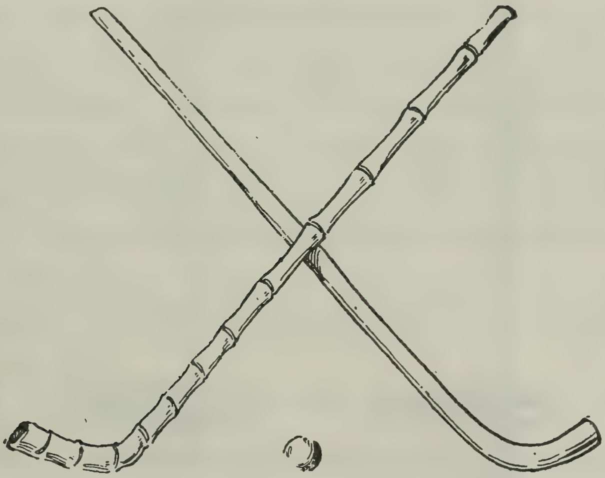


Figure 81.—*Mapuche* hockey sticks and ball. (After Manquilef, 1914.)

Men, women, and children were excellent swimmers; they indulged in this exercise partly for cleanliness and Spartan self-training, and partly for recreation. Wrestling (with hairhold) and foot-racing were also common. By far the most important sport, however, was chueca (huñno, uño, palican) or hockey, played by men, women, and children, with a small wooden ball and with sticks of *Chusquea* sp., curved at the end (fig. 81). It was an organized team game played by two sides of 10 to 15 players each, to the music of flutes and drums, before big crowds of spectators, for large wagers put up both by players and by spectators. (Cf. vivid description of modern match by Robles Rodríguez, 1942, pp. 189–208.) Various magico-religious rites were carried out in connection with the game: e. g., the ball was treated by the medicine man, the sticks were fumigated with tobacco smoke and anointed with the blood of an animal killed for the purpose. Sexual intercourse was avoided before an important match game (Guevara Silva, 1913, p. 174). Second in importance as a sport was a ball game, pillma, in which the ball of rush was thrown from under the thigh and volleyed by hand.

The two most important games of chance were the bean game (llique, lüqn, lüq) played with 8 to 12 beans, each painted black on one side, the beans themselves being "talked to" when thrown; and kechu, played with five-faced triangular dice of wood or bone.

Both of these last two games were distinctly gambling games. Gambling occurred, too, in connection with pillma, and among the modern *Araucanians*, who took over Spanish playing cards. Early records of gambling in Bascuñan (1863, p. 61), Ovalle (1888, 12:163), and Rosales (1877–78, 1:169–70) suggest that *Araucanian* gambling was aboriginal, at least not derived from the Spaniards. At any rate, since the early 17th century, the *Mapuche* are consistently described as inveterate gamblers.

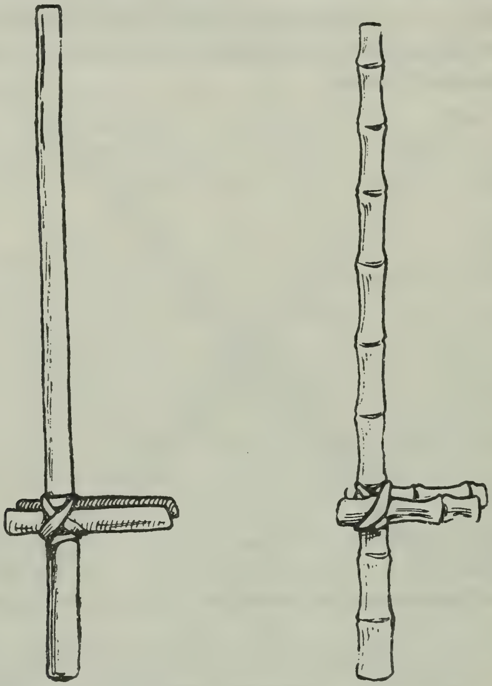


FIGURE 82.—*Mapuche* stilts. (After Manquilef, 1914, fig. 3.)

Among the many types of play common among the children were wrestling, foot races, top spinning by hand, swinging, hide and seek, and two games (Lenz, 1904–10, 2:552, 748–49) resembling our jacks and blindman's buff, both the latter suggestive of European influence. Stilts (fig. 82), mentioned as early as the middle 18th century by Febrés (1882, s. v. thenticahue; cf. Manquilef, 1914, pp. 275–76; Félix José, 1916, 1:230), may be native. Havestadt (1883, 2:648; cf. Guevara Silva, 1911, pp. 157–58) mentions a guessing game in which only the first syllable of a word was pronounced by one player and the other players had to fill out the whole word. (For detailed treatment of games and sports, cf. Manquilef, 1914.)

Tobacco.—Smoking as a recreational habit appears to be a quite recent development among the *Araucanians*. Bascuñan (1863, p. 160) mentions smoking as part of the shaman's ceremonial; Barlaeus (1647, p. 269), the blowing of smoke from the mouth and nose to Pillan. (See account of Pillan cult under Religion, infra.) Havestadt (1883, 2:746) reports the ceremonial fumigation of hockey sticks with tobacco smoke, and (2:663) the use of tobacco at the ngillatun rite; Olivares (1874, p. 493) and Carvallo i Goyeneche (1876, p. 138), fumigation by the shaman. But the early sources do not, to the writer's knowledge, record tobacco smoking as a secular habit. Pipes were of stone, clay, and wood. Monitor-type pipes were common. The Indians of the archipelago of Chiloé used a plant substitute for tobacco when the latter was lacking. Tobacco was mixed with the bark of *Aristotelia maqui* and of other plants (Guevara Silva, 1911, p. 278). The native name for tobacco is pətrem (Félix José, 1916, 1:369), pitrén (Lenz, 1904–10, 2:616), púthem (Febrés, 1882), ptem (L. de Valdivia, 1887). The theory of its derivation from *Guaraní* pety does not seem probable (Lenz, l.c.).

There was no snuffing or chewing of tobacco; recently, old or married women but not single women smoked sometimes (Guevara Silva, 1911, pp. 278, 280).

The use of *Datura stramonium* as a narcotic has been mentioned supra under Education, (p. 734).

Intoxicating beverages.—Heavy drinking is consistently attributed to the *Araucanians* from the times of the earliest writers, such as P. de Valdivia, Ercilla, Mariño de Lovera, Oña, González de Nájera, and Bascunan, down to the present day. The heaviest drinking was done at the feasts, but according to Rosales (1877–78, 1:155) some of the *Araucanians* drank only chicha and never water even in their own homes. Fermented beverages were made from more than a dozen different kinds of grains and seeds, berries and fruits, and tubers. (Cf. list in Guevara Silva, 1929, 2:189–90.) Among grains and seeds so used were maize, quinoa, Araucaria nuts, and later, wheat and barley; among the berries and fruits, molle (*Schinus letifolius*), maki (*Aristotelia maqui*), myrtle berries, strawberries (*Fragaria chiloensis*), etc., and in post-Contact days, apples, pears, and quinces; and potatoes. Favorite drinks among these were those from maize, strawberries, and apples. Making fermented beverages was the woman's task, In the preparation of them from grains, part of the process consisted of mastication of the flour. The flour so saturated with saliva was put in water and stirred, and the water then put in the pot and heated.

RELIGION

Mapuche-Huilliche religion may for convenience be treated under the following topics: Theism, the Pillañ cult, miscellaneous magico-religious beliefs and observances, and shamanism. The first three will be treated in this section; the last in a separate section to follow.

Theism.—Theistic beliefs and practices played a very important role in the religious life of the modern *Mapuche-Huilliche*. The difficult question of the aboriginality of this theism will be taken up later.

The Supreme Being was looked upon as the maker of everything, who had mastery or power over man and nature, who gave life and fecundity to man, animals, and plants, and who controlled the forces of nature for the happiness or unhappiness of man. He was an active rather than an otiose deity. Two of the more common names by which he was known were ηənéchen (master of men) and ηənémapun (master of the land). Another form of address was chau (father), but he was ambisexually addressed as rey chau (king father) and rey kushe (queen ancient one, or mother). Other names of the Supreme Being were "King," "Ancient One," "Ancient King Above," "Ancient Queen Above," "Young Man ηənéchen," "Young Woman ηənéchen," "Blue King Father," "Blue Queen Mother," "Two Faces ηənéchen (ηənémapun)." "Two Faces" (white and black) apparently referred to sunshine and rain prayed for in public rites, and also to ambivalent indulgent and severe attitudes of the Supreme Being. "Blue" connoted the residence of the Supreme Being up in the sky, where he was supposed to reside in a house of pure gold, or in the sun. According to some natives, he lived in volcanos and had a wife and children, but no parents. The Supreme Being could be and was commonly approached in prayer. He was not concerned with the moral order, nor did the state of souls in the future life depend on reward or punishment meted out by him. He was prayed to for material favors, particularly for food and life, but not for forgiveness or spiritual strength.

Cult of the Supreme Being took three distinct forms: the public ηillatun, private prayers and offerings, and shamanistic practices. The last of these will be dealt with later under shamanism.

The private practices, on which fewer details are available, included prayers and occasional blood sacrifices of animals (Robles Rodríguez, 1942, pp. 26–27), and also first-fruit offerings. As a regular practice before eating or drinking, a bit of the meat or liquid or animal blood was offered to the Supreme Being with a short prayer to him to continue giving food. (Domeyko, 1845, p. 46; Guinnard, 1864, p. 147, Argentine *Araucanians*; Ruíz Aldea, 1902, pp. 41, 65; cf. Latcham, 1922 b, p. 522, offering to spirits.)

On the public rite, the ηillatun, we have rather a large mass of data. (Félix José, 1910; Guevara Silva, 1898, pp. 268–69; 1908, pp. 303–10;

1911, pp. 236–46; 1929, 1:438–46; Housse, 1939, pp. 103–12; Moesbach, 1936, pp. 371–94; Robles Rodríguez, 1942, pp. 9–36.) This rite differed considerably in detail from place to place, it would seem, to judge from variations in the accounts. The main features were the following: A master of ceremonies, called ηen˙pin, an older man respected for age and character (distinct from machi), who presided over the rite; the setting of the day for the rite and preliminary slaughtering of animals and preparation of chicha for the feast; the rewe, a branch or branches of *Drimys winteri*, *Aristotelia maqui*, and sometimes others, stuck in the ground or tied to a thick pole or log which was firmly embedded in the earth (fig. 83); the erection of the llaηillaηi, a quadrangular platform, which served as a sort of altar (fig. 84); repeated execution of the awün, an encircling of the rewe and altar by the people on horseback and afoot; the sacrifice of animals, usually lambs, with cutting off of the ears and offering the blood to the Supreme Being in plates placed on the altar; a dipping of *Aristotelia maqui* branches, carried by each of the participants, in chicha, sucking the chicha off and spitting it out toward the sky, and asperging with the dipped branches, four times; dancing and singing; repeated prayers by the master of ceremony and others to the Supreme Being, particularly for food, for good crops, for increase of the flocks and herds, for good growing weather, for long life for children and for elders, and for the welfare of all members of the family and group. The rite ended with the usual eating and drinking feast.

In some cases the machi took a leading part in the ηillatun rite, with her characteristic performances, such as ascending the rewe, swooning, and on falling, being caught in a blanket. (Cf., e. g., Housse, 1939, pp. 105–10; see also infra under Shamanism, p. 750.)

In some sections and very commonly in association with the ηillatun rite, even in some cases as an integral part of it, was carried out the konchotun rite. This latter is the rite previously referred to (see Sociopolitical Culture, p. 727), under which one person gives a lamb to another and the lamb is then killed and partaken of jointly as a symbol of special friendship between the two. When this konchotun rite is performed as part of the ηillatun rites, the blood of the lamb may be put in a receptacle and placed on the ηillatun "altar" (Moesbach, 1936, p. 390).

Is the concept of the Supreme Being, with the associated public and private cults, aboriginal or the result of a reflection of missionary influence? An answer cannot easily be given. Some features of the concept, such as the titles King and Queen, are clearly European. Certain other features, such as ambisexuality, and the absence of prayer for forgiveness, of relation to the moral order, of future reward and punishment, and of still more distinctive Christian doctrines, and the emphasis in prayer on food and long life, look decidedly aboriginal.

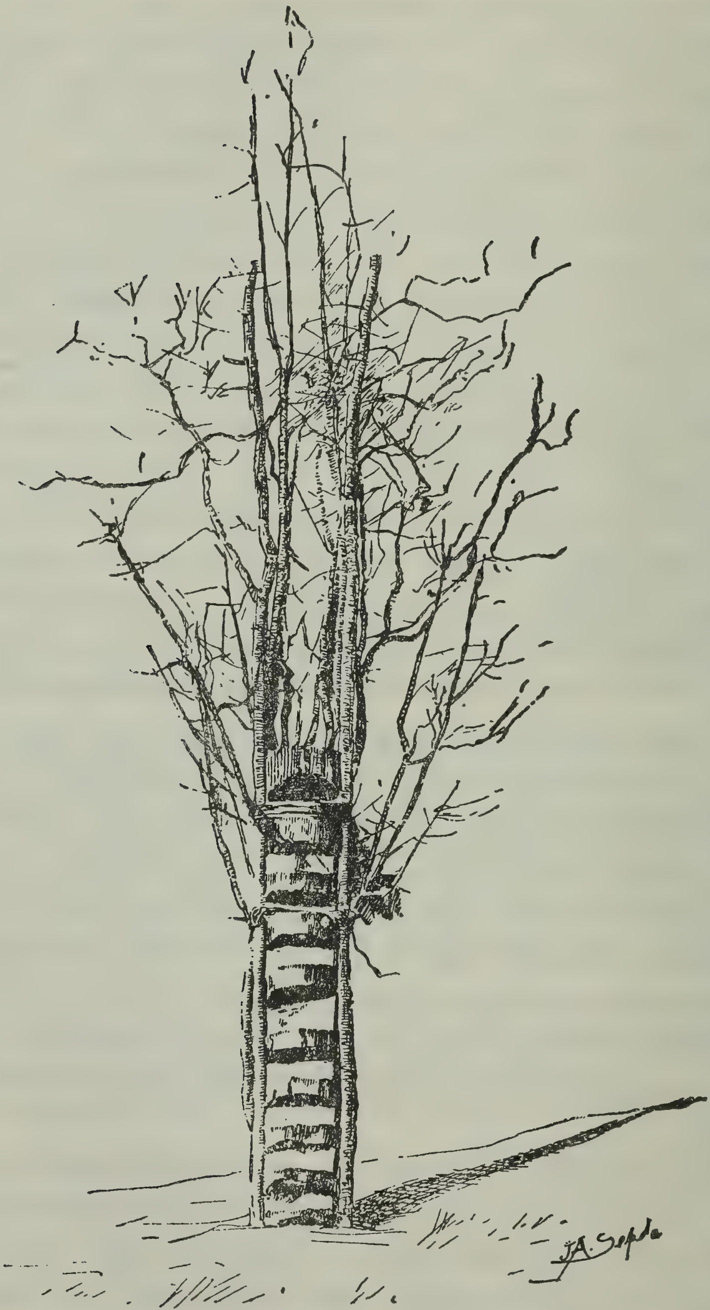


Figure 83.—A *Mapuche* rewe. (After Guevara, 1911, p. 237.)

Our dated historical documents enable us to trace the concept back to the beginning of the 19th century, and with reasonable probability to the second third of the 18th century. Beyond that the trail is lost. Earlier writers either state that the chief deity of the *Mapuche-Huilliche* was Pillañ or else deny that they had any concept at all of a Supreme Being—a denial which, given the lack of penetration on the part of these writers in so many other basic aspects of religious and secular culture, need not necessarily be taken seriously.

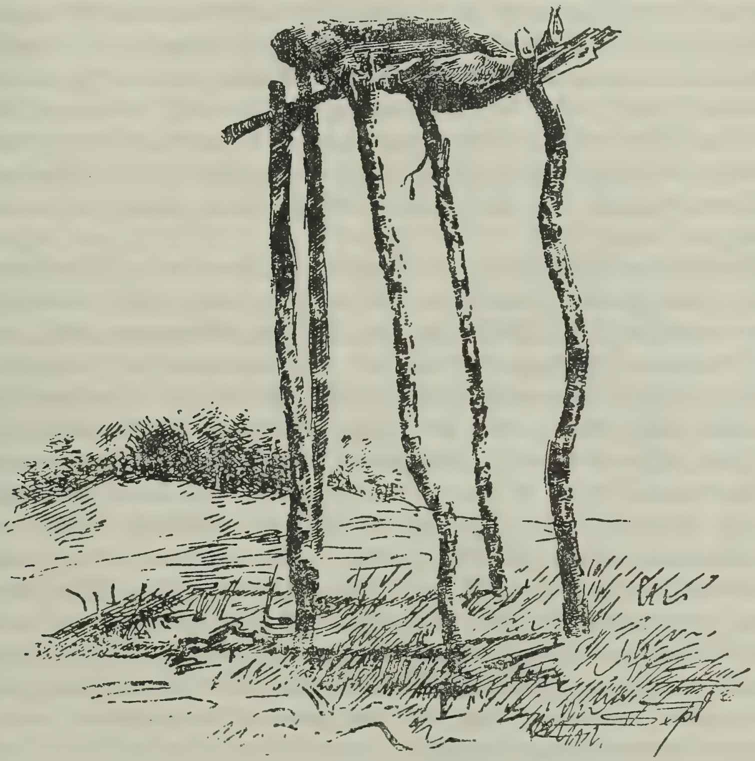


FIGURE 84.—A *Mapuche* llaŋillaŋi. (After Guevara, 1911, p. 239.)

West of the Andes, among the *Mapuche-Huilliche*, the Supreme Being concept can be quite clearly followed back well into the 19th century through the writings of Fathers Adeodato da Bologna and Octaviano de Nizza (Félix José, 1910, pp. 252–56) and of Domeyko (1845, pp. 45–46) and Smith (1855, p. 273), and, with good probability, back to the middle 18th century through Molina:

> They acknowledge a Supreme Being, the author of all things, whom they call Pillán . . . . They also call him Guenu-pillán, the spirit of Heaven; Buta-gen, the great being [ŋən, "master"]; Thalcave, the Thunderer; Vilvemvoe, the Creator of all; Vilpepilvoe, the Omnipotent; Mollgelu, the Eternal; Avnolu, the Infinite, &c . . . . He is the great Toqui of the invisible world . . . . [Molina, 1901, p. 169, cf. 1878 a, p. 245.]

Carvallo i Goyeneche (1876, p. 137) held that the *Mapuche* had no concept of a Supreme Being and that Molina's names for him were the inventions of missionaries. But the case may not be as simple as this markedly unsympathetic chronicler of the *Araucanians* made it. Some of Molina's names for the Supreme Being, taken perhaps from Febrés (1882) or L. de Valdivia (1887), such as Vilpepilvoe (cf. Argentine *Araucanian* names: Pepilfóe, Barbará, 1879, p. 161; Filpepilfoe, Milanesio, 1898, p. 41) and Vilvemvoe are pretty surely of Christian origin. But others, such as Guenu-pillán (cf. Félix José, 1910, p. 227, Wenu Rey Fucha, "Above King Old"), Buta-gen (cf. Argentine *Araucanian* names for Supreme Being: Fecha huentú, "great man," Barbará, 1930, p. 48; Vita Ouènetrou, "great man," Guinnard, 1864, pp. 82, 145; Cuchauentrú, "great man," Mansilla, 1877, 2:32; Feta huentrú, Moreno, 1879, pp. 108, 114), and great Toqui (cf. Toquichen, Falkner, 1935, p. 114, and variants of ηənechen, infra), have a more aboriginal ring.

East of the Andes, among the Argentine *Araucanians*, the Supreme Being concept is recorded consistently by our chief 19th-century observers—La Vaulx (1901, pp. 139, 178–79), Milanesio (1898, pp.41–42), Moreno (1879, pp. 10, 108, 113–14), Mansilla (1877, 2:32), Cox (1863, p. 172), Guinnard (1864, pp 82, 145–48, 237), Barbará (1879, pp. 102, 161; 1930, p. 48), D'Orbigny (1835–47, 2:259), De la Cruz (1836, p. 48)—and back to the period of first close European contact in the second third of the 18th century by the Jesuit missionaries of the 1740's to their expulsion in 1767–68 (Falkner, 1935, p. 114; cf. Sánchez Labrador, 1936, p. 65). The Argentine "*Pegüenche*" observed in 1806 by De la Cruz (1836, p. 48) all believed in a Supreme Being who made and governed all things, who was expected to look after them "as a father," who protected and helped them, but who was not offended at the evil they did. According to Falkner (1935, p. 114), who spoke *Araucanian* and who had been in close contact with the *Araucanians* over many years:

> These Indians [tribes of Argentine Pampa] believe in two superior beings, the one good, the other evil. The good power is called by the Moluches Toquichen, which signifies governor of the people . . . .

Furthermore, some significant correspondences occur between names of the Supreme Being used among both the *Mapuche-Huilliche* and the Argentine *Araucanians*. *Mapuche-Huilliche* ηənéchen, "master of men," and variants, occurs among the Argentine *Araucanians* as Geunetchen (La Vaulx, 1901, p. 139), Gne-che (Milanesio, 1898, p. 41), Gúnechen (Barbará, 1879, pp. 102, 161), correlating with "governs all things" (De la Cruz, 1836, p. 48), Toquichen, "governor of the people" (Falkner, 1935, p. 114; cf. Molina, 1901, p. 169, "great Toqui of the invisible world"); *Mapuche-Huilliche* ηənémapun, "master of the land," and variants, with reyne mapu (Guinnard, 1864, p. 147);

Mapuche-Huilliche chau, "father," with "father" (Guinnard, 1864, p. 147), chachao (Mansilla, 1877, 2:32), expected to look after them "as a father" (De la Cruz, 1836, p. 48); Buta-gen, as supra. And on both sides of the Andes the Supreme Being was not concerned with the moral order (cf. supra).

In the light of the foregoing evidence, the Supreme Being concept can be clearly traced back a century and a half and probably two centuries, and shows from the first certain suggestively aboriginal features. But even before the middle 18th century, the *Araucanians* had been open for two centuries to much European influence from captives, missionaries, and other accultural agents. (See supra, p. 696). In the light of the evidence on both sides, the chances for aboriginal or European origin of the *Araucanian* Supreme Being belief seem close to even, with perhaps a slightly greater probability that we have to do with an aboriginal belief which has been appreciably developed and pointed up as a result of White influence.

So far as the ηillatun rite itself is concerned, apart from and waiving the question of the prayers to the Supreme Being therein, its characteristic features appear as definitely aboriginal and peculiar to the *Araucanians*, and some of them, such as the use of the sacred *Drimys winteri* and the (sacrificial) killing of animals, can be traced back through our dated historical sources as far as the earlier decades following the Contact. The ensemble of the modern rite may, of course, be much more recent.

One other principal *Araucanian* rite, the new year rite, Wunn tripantu, was held at the winter solstice (June 21; latterly on St. John's day, June 24), and was characterized by a long ceremonial bath which all the group, young and old, took in a nearby stream; by the public sacrifice of a lamb; by prayers to Rañiñhuenu (lit. "zenith," a name for Supreme Being: Félix José, 1916, 1:193) for general welfare during the year; and by an obligatory rest (Christian influence?) from work throughout the day (Claude Joseph, 1933–34, pp. 1063–64).

The Pillañ cult.—In contrast to ηənéchen, who was associated with and appealed to mostly for food and long life, Pillañ (Pillan) was pretty consistently associated in our sources from at least the first half of the 17th century on (Marcgrav, 1648, p. 286; cf. Febrés, 1882, s. v.) with dramatic catastrophic natural phenomena, such as volcanic eruptions, thunder and lightning, river floods, tidal waves, etc. The crops, too, according to one tradition, were under the protection of Pillañ (Félix José, 1916, 1:181). According to Sors (1921, p. 184), epidemics were attributed to Pillañ's anger. We do not seem to have any information on what was supposed to arouse Pillañ's ire. Data, too, on the cult of Pillañ are meager and scattered. According to Marcgrav (1648, p. 286), Pillañ was appealed to by the *Mapuche-Huilliche* to destroy their enemies, and tobacco smoke was blown in the air with the invocation: "Accept this, Pillañ." Molina (1901, p. 169) by way of exception calls the "Supreme Being, the author of all things," Pillañ. Pillañ, while in some respects fear-inspiring, was, it seems obvious, also helpful.

Pillañ, in the plural, was also used as a term for spirits of the departed, especially the spirits of prominent headmen and ulmens, and, seemingly, at times for other benevolent or malevolent supernatural beings (see infra), and even for prominent men still living.

Other beliefs and observances:

(*a*) *Wekufü.*—Nearly all evil, particularly evil of a noncatastrophic, secret, subtle, or treacherous nature, was ascribed to the impersonal power or personal being or beings called wekufü (huecúvu, güecubu, and variants). Wekufü, impersonal or personal, was always maleficent. In contrast to Pillañ and ŋənéchen, no cult in the way of sacrifice or supplicatory prayer was offered to wekufü. Rites in connection with wekufü, most of them carried out by the shaman, had the purpose of driving wekufü away.

(*b*) *Animistic spirits.*—A number of animistic spirits are mentioned in our sources, such as Maréupuantu (twelve suns), Meul'en [wekufü] (whirlwind [wekufü]), Anchimallen arəmko (a certain green toad considered as master of waters; also known as ŋen'ko shompallwe, and other names), Epuñamuñ (two feet), Nguenpiru (master of the worms). Somewhat different functions are assigned to these various beings by different observers. Meul'en, for example, is usually reported as beneficent; Epuñamuñ, as god of war. "Maruapoante" was supposed, according to Marcgrav (1648, p. 287), to give information in dreams as to what woman a man should marry; if he chose the one indicated, she would without fail become pregnant. Some of these beings were invoked in shamanistic rites; others, seemingly in nonshamanistic ones. Traces only of a solar cult existed; oaths were taken by the sun (cf. infra); the wife of the sun was believed to be benign. (Olivares, 1864, pp. 51–52; on moon as wife of sun, see Lehmann-Nitsche, 1918, pp. 45–49.)

In some localities, the puma was spoken of, not by its proper name, but by respectful circumlocutions (Guevara Silva, 1913, p. 282).

(*c*) *Manistic beings.*—All in all, animistic cult seems to have bulked more largely in *Mapuche-Huilliche* religion than did manistic. The deceased ancestors, often called Pillanes, were prayed to to help in martial expeditions. Deceased shamans played an important part as helpers of living shamans. (See infra under Shamanism, p. 750.)

(*d*) *Magic.*—A great number of magical practices, apart from those followed in shamanistic rites, have been recorded, such as: Love and jealousy procedures; eating parts of an animal to acquire its qualities; rubbing the body with otter genitals as an aphrodisiac; transferring disease by bodily contact to a lamb, dog, or chicken, and then killing the animal; using bones and stones, especially perforated stone clubheads (Housse, 1939, pp. 95–97), as talismans; depositing offerings in certain cupped rocks (Guevara Silva, 1911, pp. 211–16); dissolving bezoars (probably scrapings) in water and having horses drink the mixture to make them swift in battle, and passing feathers of certain birds over the body and feet of horses for the same purpose (Rosales, 1877–78, 1:115); using hairs or bits of clothing of a person to harm him (Moesbach, 1936, p. 369). (For fuller details, see Guevara Silva, 1908, pp. 259–61; 1913, pp. 266–69, 272–73, and passim in ch. 5.)

(*e*) *Ritual patterns.*—Some of the more outstanding ones were the following: Aspersions with blood or chicha; the killing of llamas, later of sheep, with extraction of the heart and sucking of blood from same; the use of *Drimys winteri* as the sacred tree; four as the sacred number; ritual recognition of the four cardinal points; and fumigations with tobacco smoke.

(*f*) *Divination.*—Certain forms of divination were used, such as with chicha (Latcham, 1922 b, pp. 516–17) and with drops of water placed on stone ax heads (Guevara Silva, 1898, 1:100), but divination was not, it seems, very highly elaborated. (See also under Shamanism, p. 750.)

(*g*) *Omens.*—Dreams figured largely in omen beliefs. A fox bark at night, a mero (*Agriornis livida livida*) bird on the hut, or the cry of certain nocturnal birds over the hut were omens of sickness and death. Owls were birds of evil augury. A fire emitting many sparks or crackling as if the wood were green, and a loika (*Trupialis* sp.) bird singing at the hut door, were signs of guests to come. Certain carnivorous birds following an army or a fox passing near or through the army on march on the left side were bad omens. Rosales (1877–78, 1:165; cf. Guevara Silva, 1911, p. 85) states that twitches felt in the eyelids or the arms were interpreted as omens—a common North American Indian belief, found widely in other parts of the world. (For further details on omens, cf.: Olivares, 1864, pp. 52–53; Guevara Silva, 1908, pp. 313–16, including data on dreams and nightmares; 1913, pp. 281–83; Housse, 1939, pp. 114–15.)

(*h*) *Taboos.*—Guevara Silva (1908, pp. 226–30; 1929, 2:155–66) lists many taboos; some of these are purely social prohibitions; others may be more of the "negative magic" order. To give just three examples: Snakes were not to be trod upon; good beasts and birds were not to be maltreated or insulted; rotten eggs were not to be put in gardens lest the harvest turn out badly.

(*i*) *Oaths.*—Both assertory and promissory verbal oaths were common, and oaths were recorded from earliest post-Hispanic times. The person swore by Eponamón (Ercilla, 1910, p. xix), by the sun (Cox, 1863, p. 88; Robles Rodríguez, 1942, pp. 61–62; Milanesio, 1898, p. 41), by the governor of heaven and earth (Robles Rodríquez, loc. cit.), or, it seems, more often, by his own heart, eyes or head, or by his father, mother, wife, or children (Havestadt, 1883, 1:149, 398; Robles Rodríguez, loc. cit.; Guevara Silva, 1898, p. 211; 1908, p. 203). Havestadt (1883, 2:709–10) described certain solemn pledges bearing some resemblance to gesture oaths: spitting on and then clasping right hands to bind a friendship; shaking right hands on committing someone to another's care to be taken to a fourth party; touching of a "strophiolum" (small garland?) by blood kin on both sides to denote that composition paid over has settled the matter. In some of the above oaths, a magico-religious element is fairly clear; in others, perhaps quite absent.

SHAMANISM

Mapuche-Huilliche shamanism has been very thoroughly and critically treated in a recent paper by Métraux (1942 b). In the following outline, based very largely on Métraux's study, most source references are omitted, as his work, with full bibliographical data and extensive citations, is easily accessible.

The most common name for the *Mapuche-Huilliche* shaman was machi. Other much used names were voigueboye and dngul (each with many variants). In earlier times, the male shamans were very commonly transvestites, dressing as women and practicing sodomy. By the second half of the 18th century, the machis were ordinarily women (pl. 156, *top left*). In more recent times, the profession has been followed almost exclusively by women.

There were no shaman societies. In earlier times, candidates were instructed secretly in caves or hidden places by practicing shamans and were initiated into the profession at a solemn feast marked by the sacrifice of a llama and by an exhibition of powers. In the initiating rite, too, the initiator symbolically exchanged tongue and eyes with the candidate.

In more recent times, a person was called to the shamanistic profession by the Supreme Being or by a spirit through an interior revelation. A person took the profession not by free choice or quest; the calling was rather imposed supernaturally upon her. She was then taught by a professional machi over a long period before she was consecrated. At the consecration itself, lasting several days, the candidate was given more intensive training in the formulas, songs, dances, and drum beats of the consecration rite. A rewe, a sacred tree, was put up before her hut. Among the very elaborate rites of consecration were prayers addressed to the Supreme Being or to the celestial shamans for granting of machi powers to the candidate, and exchange of blood between the shaman consecrator and the candidate.

The functions of the shaman were many: To discover the sorcerer or being responsible for death; to bring rain; to predict the outcome of war; to discover hidden or future things; to bring good or bad luck in hockey games or horse races; and , above all, to cure the sick. In clairvoyance, shamans used a type of scrying, looking into a tray of water (Rosales, 1877–78, 1:135). Wonder-inspiring feats such as dancing barefoot on live coals or swallowing them were part of the trade (ibid., 1:144, 169). The chief instruments used by the shaman were: A small hand drum (fig. 85; see supra under Musical Instruments, p. 738) containing three or four sacred likan (bits of crystal or obsidian or other stone supposed to have been thrown up by volcanos: Félix José, 1916, 1:115); a calabash rattle; an iron bow with small bells on it (early recorded ca. 1742 among Argentine Indians: Morris, 1927, p. 195).

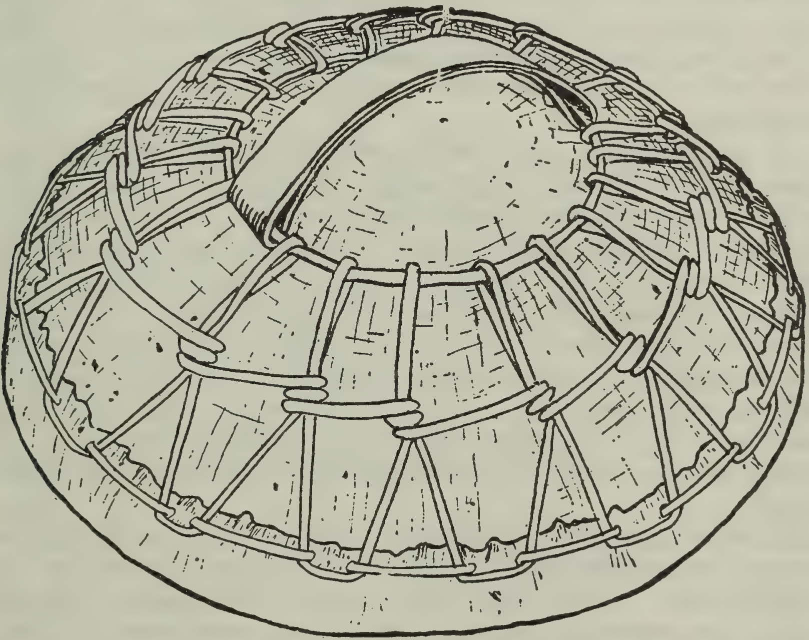


Figure 85.—A Machi's drum. (After Claude Joseph, 1931, fig. 30.)

While the shaman's tasks were varied, the chief one was the cure of disease. Disease, like most other evils, was caused by impersonal or personal wekufü (cf. supra). Three theories of disease-causation prevailed: the intrusion of some object or of an evil spirit into the sick person; the stealing of the soul of the patient; the administration of poison directly or magically by a sorcerer. Evil spirits caused disease either on their own initiative or, more often, at the instigation of some sorcerer.

To work a cure, in earlier times, the machi had recourse to the help of his or her familiar spirit(s). The machi of modern times mostly claimed to derive her power directly from ŋᵊnéchen, the Supreme Being, and/or from deceased shamans. She also called upon deceased machis to intercede with the Supreme Being to give her power to cure. She was likewise helped to get in touch through trance with the spiritual world by special spiritual helpers and/or by projection of her own soul out of her body.

Ancient methods of treatment, as described in detail by Bascuñan (1863, pp. 159–61), included: Use of the *Drimys winteri*, the drum, fumigating with tobacco smoke, killing of an animal with extraction of the heart and licking of the blood therefrom, pretended extraction and replacement of the patient's entrails, and shamanistic trance. Other older practices included massage and extraction by suction or other method of the small stick, worm, or other object responsible for the disease.

All these features, apart from the pretended entrail extraction, were common in more modern shamanistic treatment of disease, together with a certain number of additional features. Such more modern ones were: Recitation of powerful curative prayers or magical formulas given to the shaman by the Supreme Being; climbing by the machi of the ladderlike pole of the rewe (pl. 153, *top, right*), and falling in a sort of swoon therefrom and being caught by assistants in a blanket; prayers or incantations, charges on horseback with shouts, and the palm-to-mouth war cry, to put to flight the evil spirits; use of the calabash rattle, and playing of flutes by the machi's assistants. Actually, the rites in modern treatments were very elaborate and complicated.

Moesbach and Félix José took the view that the shaman had no part in the ŋillatun rite. And Robles Rodríguez is silent on such participation. On the other hand, Guevara and Housse have presented data showing clearly that, in at least some cases, the machi entered intimately and actively into the ŋillatun rite as an intermediary between the people and the Supreme Being.

The line between the shaman (machi) and the sorcerer (kal·ku) cannot always be easily drawn. From the native standpoint, it would seem that the machi's function was fundamentally a socially beneficent one; the sorcerer's, a fundamentally maleficent one. A kal·ku believed to be responsible by use of poisons, of mythical servitors, or of ivunche (stolen infants) for the death of a person, was apt to be put to death, and commonly by being burnt alive. (For details on sorcerer, cf. Robles Rodríguez, 1942, pp. 167–72.)

MYTHOLOGY

Much of *Mapuche-Huilliche* folklore has been deeply influenced by European sources. It is often very hard to determine just where aboriginal elements end and later intruded ones begin. Much, however, that is aboriginal has survived.

Cosmogony centered chiefly around the treŋ treŋ flood story, in several versions, the most complete early one being that of Rosales (1877–78, 1:3). The flood was caused by a quarrel between two great serpents, treŋ treŋ and kaikai. The higher kaikai raised the waters, the higher did treŋ treŋ raise the mountain on which some humans took refuge, while others became transformed into fish, marine animals, rocks, etc. At the end of the flood, the surviving humans engendered offspring who became the ancestors of the later Indians. (On flood, cf.: Lehmann-Nitsche, 1918; Gusinde, 1922.) Another tradition has it that the people originally issued from large rocks (Félix José, 1916, 1:299).

Mapuche-Huilliche narrative folklore, of which a considerable amount has been published, is largely concerned with tales of: Supernatural beings, such as Meul'en and Shompallwe previously mentioned (under Religion, p. 748), Cheurfe (comet or shooting star; also a cannibal giant), and others; hybrid monsters, such as Waillepen (a calf-sheep), Piwichen (a winged serpent); ghosts and apparitions (including the Lenore motif); sorcerers and their machinations; and animals, among whom the fox played a leading role as the wily predatory adventurer who was frequently outwitted or brought to heel. Folk stories were told by men or women, at night, with enlivening mimicry, intonation, and gesture, and with frequent interpolations of, "they say," "it is said," "it seems." (For collections of *Araucanian* folklore cf.: Lenz, 1895–97, especially 94:100–20, 245–62, animal stories; 94:691–719, mythical beings, 1896; Guevara Silva, 1908, pp. 319–63; 1911, pp. 98–117; Félix José, 1910, passim; Speck, 1924; Soustelle, 1938.)

LORE AND LEARNING

Sciences.—A good many constellations and planets were known by native names. The Milky Way was the heavenly river or the road of the "fairies." An eclipse of the sun or moon was verbalized as the death thereof. Comets, according to Molina (1901, p. 177), were not always omens of disaster. In recent times, according to Moesbach (1936, p. 82), earthquakes were attributed to the Supreme Being; volcanic eruptions to Pillañ or wekufü.

From the slaughtering of animals and shamanistic dissections to discover the sorcerer responsible for death, considerable knowledge of anatomy must have existed, but we do not have specific details.

Wide use was made of herbal curatives by professional shamans and semiprofessional or amateur healers. Gusinde (1936; cf. 1916–17) lists 324 such plant remedies used in the cure of disease and for related purposes. Plants were used as purgatives, emetics, sudorifics, abortifacients, aphrodisiacs, and for a great many other purposes, in infusions, for massages, and in other ways, depending on the malady or on the objective desired. Bloodletting with a small pointed flint, hafted, was common within as well as outside of shamanistic practice (Oyarzún, 1916–17, pp. 61–62). An enema syringe was made of the bladder of an animal with a small cane tube attached thereto. Rosales (1877–78, 1:324) saw an Indian give water boiled with bezoar in it to a person ill of heart disease. Sweat baths were taken as follows, according to Félix José (1916, 1:236): Wild sage or other plants were put in water in a trough, and four white-hot stones thrown successively into the trough over which the patient placed himself, covered with blankets or clothing in order to sweat. There was also considerable skill in handling of dislocations, fractures, and wounds. (For details on medical and hygienic practices, cf. Gusinde, 1916–17.)

Communication.—To judge from the mention of them in the very early literature, smoke signaling (Mariño de Lovera, 1865, p. 116) and the quipu (González de Nájera, 1889, p. 101; Ovalle, 1888, 12:162) were pre-Hispanic. The quipu (pron) or knotted cord was used for a number of purposes: To keep accounts of livestock and records of events (Ovalle, loc.cit.; Bullock, 1911, p. 18); to indicate the number of days at the end of which the summoned representatives or warriors would assemble for war, festival, sport, or other business; to keep tab of the number of days' work done, or of the number of payments to be made in case of composition for murder (Febrés, 1882, s.v. pron; Havestadt, 1883, 1:521, 2:755); and for other purposes.

Enumeration, time-reckoning, and measures.—Counting was by the decimal system. The numbers for 100 and 1,000 were from *Quechua*.

The year was divided into two parts by the December and June solstices, into 4 seasons, and into 12 lunar months; the 24-hour day into 10 or 12 parts. Moesbach (1936, pp. 82–84) lists 6 seasons and about 15 divisions of the day. The time of day was calculated by the position of the sun; of night, by the stars.

Various lineal measures were recognized corresponding more or less to our span, foot, pace, arm-length, etc. (Molina, 1901, p. 177; Guevara Silva, 1898, 1:288); and liquid and dry measures corresponding roughly to our pint, quart, six-quarts, etc. (Molina, ibid.).

Mental derangement, it may be added, in the form of milder parataxes or graver psychoses appears to have been uncommon, at least in recent times (Guevara Silva, 1913, pp. 306–07).

CULTURE OF THE PICUNCHE

Of the culture of the *Picunche*, the *Araucanian*-speaking natives who formerly occupied the region from the foot of the Andes to the Coast and from Coquimbo or the Choapa to the Itata River or the

Bío-Bío River, very little is known. Cultural modifications had already come about in pre-Hispanic times as a result both of *Inca* occupation of the northern section of the region and of other, non-*Inca* influences. Soon after the Spanish Conquest, from 1536 and 1540 on, the whole region suffered radical cultural transformation. The early chroniclers have left us only the most fragmentary data on pre-Hispanic aboriginal *Picunche* culture, Presumably, it was of the same general pattern as the *Mapuche-Huilliche* culture, but in the absence of specific records we cannot be certain. The meager information at our command gives evidence of considerable identity, but also of some divergence.

Irrigation was practiced as far south as the Rapel, but there were no terraces south of the Choapa (Latcham, 1928 a, pp. 135, 139). Huts were commonly of wattle-and-daub construction, rectangular, with thatched roofs (Molina, 1901, p. 122; Latcham, 1928 a, p. 138).

The weapons reported as having been used in the "valley of Mapuche" (Mapocho, near modern Santiago) in 1541 by the natives under Michimalongo were: Atlatls, bludgeons with metal points, short lances, pikes, heavy macanas, very big bows with long thin arrows (Mariño de Lovera, 1865, pp. 46–47); in some of these weapons *Inca* influence may be suspected, as the *Inca* domination extended at the time well beyond the Mapocho.

Clothing was very much like that of the *Mapuche-Huilliche.*

Mound burials are found archeologically in the region, with the body resting supine or on the side, sometimes face downward; some of the burials contain undecorated pottery; others, a black or dark pottery, sometimes polished and often adorned with figures of men and animals modeled in relief (Latcham, 1928 a, pp. 133, 135, 139).

On *Picunche* social and religious culture, we have no definite detailed information. (For fuller data on *Picunche* culture, cf. Latcham, 1928 a, ch. 7.)

CULTURE OF THE ARGENTINE ARAUCANIANS

In view of their geographical location and of certain cultural affinities, the 16th-, 17th-, and early 18th-century "*Pehuenche*" of Mariño de Lovera, Rosales, and Pietas, living south of about lat. 37° or 38° S., are dealt with in the following section on the "*Pehuenche*"; the later 18th- and early 19th-century "*Pehuenche*" of Molina, Amat y Junient, Carvallo i Goyeneche, De la Cruz, and Poeppig, living in the Andean uplands and eastern slopes between about lat. 34° or 34° 30′ and 37° or 38° S., in the present section, although some of these latter "*Pehuenche*" were located at the time in Chilean territory.

Our most important sources on the culture of the Argentine *Araucanians*, including these latter "*Pehuenche,*" with dates of observation where such are determinable, are: Molina (1878 a, 1878 b, 1901) before 1767, Falkner (1935) between circa 1744 and 1767, Amat y Junient (1927) circa 1760, Sánchez Labrador (1936), Carvallo i Goyeneche (1876) last third of 18th century, Sors (1921) circa 1765–80, De la Cruz (1836) 1806, Poeppig (1835–36) 1828–29, D'Orbigny (1835–47) 1829, Barbará (1879, 1930), 1847–48 to circa 1856, Guinnard (1864) 1856–59, Cox (1863) 1862–63, Musters (1871) 1869–70, Mansilla (1877) 1870, Moreno (1879) 1874–77, Milanesio (1898) 1884–98, La Vaulx (1897–98, 1901) 1896–97. Of these sources the most detailed is De la Cruz. D'Orbigny's and Barbará's lengthy accounts are largely drawn from that of De la Cruz. The other accounts are mostly based on independent first-hand observation. In general, our information upon the Argentine *Araucanians* is not nearly so abundant as that upon their Chilean brethren.

The culture of the Argentine *Araucanians* was distinctly a palimpsest one. Some elements of material culture were given up and others substituted therefor, and a few shifts in social and religious culture occurred, but beneath these superficial changes the basic ancient *Araucanian* culture derived or brought from Chile remained largely intact and is readily discernible. The more significant of these changes, so far as known from our very imperfect source material, are given in this section.

Among many of the Argentine *Araucanians*, horticulture, the basic productive economy of the Chilean *Araucanians*, was abandoned entirely, although some of them kept up a certain amount of gardening. (Cf. Falkner, 1935, pp. 36, 126; Cox, 1863, p. 96; Musters, 1871, pp. 70–71, 239; Milanesio, 1898, p. 39.) Sors (1921, 39:184) states that the *Pehuenche* ordinarily did not plant. The *Pehuenche* of Molina (1901, p. 263), De la Cruz (1836, p. 63), and Poeppig (1835–36, 1:381, 383) practiced no horticulture, it seems, but possessed cattle, horses, and other livestock in fair abundance. Among many of the *Araucanians* farther east in the Piedmont and out on the Pampa, hunting, with the bolas and other weapons, entirely superseded horticulture.

The *Pehuenche* men as well as women used to paint their faces and arms and legs and to wear various pendants and "jewelry". (Amat y Junient, 1927, 52:371; Carvallo i Goyeneche, 1876, p. 136; Sors, 1921, 39:181.)

Among the new elements, mostly adopted from the non-*Araucanian* Pampean tribes, were: The bota de potro (Molina, 1901, p. 262; De la Cruz, 1836, p. 33); roasting meat by placing hot stones inside the carcass (Cox, 1863, p. 189); the portable skin-covered tent of conical (Poeppig, 1835–36, 1:382) or toldo (De la Cruz, 1836, p. 37; Cox, 1863, pp. 144–45) type; chicha of fermented algarroba beans (Mansilla, 1877, 2:45); chewing of otcho resin (Guinnard, 1864, p. 210); use of horse blood as a soap for washing the face, the hair, and mantles (De la Cruz, 1836, p. 63; D'Orbigny, 1835–47, 2:235), and of a certain clay for rubbing their bodies to cleanse (D'Orbigny, 1835–47, 2:235; Cox, 1863, p. 174). Tobacco smoking was largely a secular practice, at least after the early 19th century (D'Orbigny, 1835–47, 2:241); the smoke was often swallowed so as to produce intoxication (Guinnard, 1864, pp. 149–50; Cox, 1863, p. 82; Mansilla, 1877, 2:46; cf. Falkner, 1935, p. 91), a custom, however, not entirely unknown among the Chilean *Araucanians* (Guevara Silva, 1911, p. 280).

Some camps seen by Moreno (1879, p. 11) contained each about 10 large toldos occupied by relatives and allies of the principal headman of the group. The "caciques" listed by De las Casas (1836–37, 5:95–101) had each from 6 to 30 warriors, in one case 60, under them.

Among the *Pehuenche* described by De la Cruz (1836, p. 58), the names of children, both boys and girls, consisted of the name of the father (the name of his "casa," gotten from birth) plus an adjectival one bestowed by the child's "padrino." Among Cox's *Pehuenche,* according to his somewhat confused and obscure account (1863, pp. 142–43), personal names consisted of two words—one of them, apparently a kuga name, such as "lake," "river," "tiger," etc.—but the names of fathers and sons had nothing in common. A married woman was never called by her proper name, although an unmarried girl might be so called but not by a stranger.

According to Guinnard (1864, pp. 130–33), to be born with more than five fingers or toes was an omen of great good fortune for the whole family. Deformed infants were killed by breaking their bones or suffocating them, and their bodies were exposed some distance off to the wild dogs and birds of prey. Infants were placed in a ladderlike cradle (cf. also Nordenskiöld, 1931 b, p. 79); for croup they were given, as an emetic, a mixture of putrefied urine, a kind of "alcali," and gunpowder.

Three or four types of first menses rites are reported among the Argentine *Araucanians.*

Among the *Pehuenche* described by De la Cruz, when the first menses occurred, the girl notified her mother, who at once segregated her in a corner of the toldo with the injunction not to lift her eyes to look upon any man. The next day the girl was taken out twice, once at early dawn and again at sunset, by two of the women and made to run swiftly a long distance. Early the third day, they made her go out and gather three bundles of firewood and place them in three separate spots. Then all the Indians were invited to the celebration of the girl's new status. (De la Cruz, 1836, p. 62; the accounts by D'Orbigny, 1835–47, 2:247–48; and Barbará, 1879, pp. 175–76, and 1930, p. 39, were taken from De la Cruz.)

In the rite described by Cox (1863, pp. 159–60) for the "*Pehuenche*" north of the upper Limay, the girl notified her mother or nearest kin, who in turn notified the head of the family, who then chose his best mare to be eaten at the feast. The girl was placed in the rear of the toldo, where she received visits of congratulation from all the "indios" and "indias" of the camp. To each of these she gave a piece of mare's meat, according to their rank and degree of kinship. Then, seated on a mantle, she was carried through the camp, and a little earth mixed with blood was put in her mouth. There was no bath, so Cox was told.

The first menses rite as recorded by Moreno (1879, p. 13) among the "*Pehuenche*" of the Collon-Curá, near the volcano of Quetro-Pillan in the Lake Nahuelhuapí region, included a 3-day dance around a damajuana by day—with five dancers performing to the beating of a drum made of a plate covered with painted skin—and a bonfire at night.

At the rite—apparently *Araucanian*, to judge from the linguistic cues, although it was celebrated for the daughter of a "Pampa" man—which was witnessed by La Vaulx (1897–98, pp. 95–96; more detailed in 1901, pp. 218–30) near the site of present-day Colonia Sarmiento, a special tent was erected; the men, women, and children went around it singing to drive away bad luck and to ask supernatural favors; the girl was then installed in a sort of altar in a corner of the tent and kept there 3 days out of sight under the surveillance of four old women; horses and cattle were gotten for the feast; two fires were lighted before the special tent, and the men, with ostrich feathers in their hair, danced four at a time to the beat of the drum; the old women then took the place of the men dancers, and leaped in the fire.

The rite recorded by Claude Joseph (1933–34, pp. 1061–63) as practiced by *Araucanians* in the Andean Cordillera included the erection of a low domed hut for the girl, short rations for her for 4 days, trials of skill by the women, fast running by the girl, carrying the girl around seated on a board, and a final banquet of mare's flesh.

Some of the elements in the above rites strongly suggest *Tehuelche* or other trans-Andean influence. But other of the elements, such as the race at dawn and sunset and the fetching of firewood—paralleled in the Oregon, northern Californian, and Southwest regions of North America—are not recorded elsewhere in South America, to the present writer's knowledge, and are very hard to account for in view of the consistent silence of our sources regarding first menses rites among the Chilean *Araucanians*.

Among the *Pehuenche* of Antuco, a corpse was taken out of the toldo feet first, lest the deceased return (Poeppig, 1835–36, 1:393).

Argentine *Araucanian* theism (see supra, p. 742) and shamanism (cf. De la Cruz, 1836, pp. 38, 48, 53: Poeppig, 1835–36, 1:394–96; Barbará, 1879, pp. 165–69; Milanesio, 1898, pp. 43–44) differ, so far as they are recorded, only in minor details from *Mapuche-Huilliche*. Non-*Araucanian* influences in the religious terminology of the Argentine *Araucanians* can be seen in the use of the names "Soy-Chú" for the Supreme Being (Barbará, 1930, p. 49) and of "Gualichu" for wekufü. Gualichu was used, according to Lehmann-Nitsche's field studies (1922, p. 30), not among themselves, but only when talking with Spanish-speaking people. The Supreme Being of the Argentine *Araucanians* appears to be more closely associated with the sun than among the *Mapuche-Huilliche*. Oaths to fulfill agreements were made to the sun (Cox, 1863, p. 88; Milanesio, 1898, p. 41).

Balls of hardened hair found in the bodies of cattle, and gravelly formations from horse kidneys, were preserved as charms (Guinnard, 1864, pp. 243–44).

CULTURE OF THE PEHUENCHE

Our chief original sources, with dates of observation, on the culture of the "*Pehuenche*" are the following: Mariño de Lovera (1865), 1562–63; Rosales (1877–78), 1650–53; Pietas (1846), 1729; Amat y Junient (1927), ca. 1760; Molina (1901), before 1767–68; Carvallo i Goyeneche (1876), last third of 18th century; Sors (1921), ca. 1765–80; De la Cruz (1836), 1806; Poeppig (1835–36), 1828. (Cf. most of data assembled by Latcham, 1929–30, 63:150–72.) It is far from clear, however, whether all these writers were referring to the same ethnic entity, for "*Pehuenche*," as previously noted, was used in a very loose sense, ordinarily to denote peoples living near or in the Andes who drew largely on the *Araucaria imbricata* for their sustenance.

From their location, between about lat. 34° and 37° S., as well as from the linguistic and cultural evidence, it appears probable that the "*Pehuenche*" described by Amat y Junient, Molina, Carvallo i Goyeneche, De la Cruz, and Poeppig were all one and the same people. Their culture was dealt with in the preceding section on Argentine *Araucanians*. We shall confine treatment in this section to the culture of the *Pehuenche* described by the three earlier of the above-listed sources.

These latter "*Pehuenche*" lived somewhat farther south, from about lat. 37° to 40° or 41° S., within the general range of the *Araucaria imbricata*, kept well up in the Cordillera or in the intercordilleran valleys, and differed in some specific cultural respects from the *Mapuche-Huilliche*. To judge from the location of these "*Pehuenche*" as well as from the cultural data, as recorded by our three sources, there is at least an even chance that they all represent the same ethnic entity, but this is by no means certain, in view of the known mobility of population in the area in question, especially around and after the beginning of the 18th century.

The chief food staple, until at least the time of Pietas, was *Araucaria imbricata*, piñons, from which, according to Mariño de Lovera (1865, p. 268) the natives made "bread, wine, and dishes"—a statement repeated almost word for word by Rosales (1877–78, 1:223, 468)—and which they stored in a manner to last 4 or 5 years. Whether they practiced any agriculture in Mariño de Lovera's time is uncertain from his account, while Rosales' two statements are not easily harmonized: "no cuidan de sembrar" (1:468), and "cogen sus trigos y zebadas [European? or the native *Araucanian* "cebada"?] con abundancia los Pegüenches, aunque son poco labradores y con muy poco que siembran se contentan" (1:192). Pietas (1846, pp. 499, 500) seems to imply that horticulture was absent. For the rest, climatic conditions in the upper Andes were not favorable to gardening.

The weapons used were the bow and arrow, and the bolas (Pietas, 1846, p. 499).

Dwellings were of hides of horses and cattle.

Rosales (1877–78, 1:198) alone records the use of a type of snowshoes made of "coleos" (*Chusquea* sp. probably) to prevent sinking in the deep snow, but gives no details on construction—the only occurrence of snowshoes reported for South America, to the writer's knowledge, except the *Ona* one.

Each *Pehuenche,* according to Rosales (1877–78, 1:197; see also Pietas, 1846, p. 500), had exclusive and hereditary rights to gather piñons in a given district—held, added Pietas, just as the Spaniards hold their own vineyards.

In the middle of the 18th century, the culture of the "*Pehuenche*" between lat. 34° and 37° S. was fundamentally like *Mapuche-Huilliche,* as is clear from Molina; still earlier in the same century, Pietas stated (1846, p. 499) that the "*Pehuenche*" farther south had "los mismos ritos y costumbres" as the *Huilliche;* for all we know, even in the 16th and 17th centuries, the culture of the *Pegüenche* of Rosales and of the piñon-eating mountaineers of Mariño de Lovera, apart from the few reported minor differences we have listed and, presumably, other nonreported ones, may have been fundamentally in conformity with the culture of the *Mapuche-Huilliche.* At any rate, we have no tangible evidence of fundamental difference of pattern.

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EXPANSION OF THE ARAUCANIANS IN ARGENTINA

By Salvador Canals Frau

The campaign of General Roca in the year 1879 against tribes of the south put an end to the Indian domination of the entire realm of the Pampa. Several tribes which up to that time had ruled the greater part of the Pampa húmeda, or the eastern section, and the Región del Monte, or the western section, were dispersed or driven beyond the Río Negro, the northern boundary of Patagonia. The central plain of Argentina subsequently was definitely and completely opened to civilization. Thus ended uncertainty and open warfare that had begun the very moment that the Spaniards established themselves on the right bank of the Río de la Plata. The original Buenos Aires was founded in 1536 by the first Governor of the Río de la Plata, Don Pedro de Mendoza, but had to be abandoned later. In 1580, General Juan de Garay founded the present city. In both instances there were open combats with the Indians who ruled the plains.

The Indians who occupied the region of the Pampa in the 16th century, and who had contacts first with Don Pedro de Mendoza and later with Don Juan de Garay, were ethnically different from those whom General Roca drove out during the second half of the 19th century. Culturally, they might have seemed alike, but racially and linguistically they were distinct. From time to time, during the three centuries between 1580 and 1879, the Indian population of the vast geographical area known as the Pampa underwent a notable change. The primitive population of the plains in 1580 was Pampean in racial type and was, therefore, racially and culturally similar to the other peoples of Patagonia. It was particularly like its southern neighbors the *Puelche* (*Genaken*) and the Patagonians, and its northern neighbors, the *Guaycurú*. The population which General Roca drove out in 1879, however, resembled in outward appearance the *Araucanians* of Chile, whose language they also spoke (map 1, *No. 18*). The *Araucanians* are usually classified racially and culturally with the peoples of the Andes, who have the highest culture in South America.

One might ask how this change in population came about and what were the causes. Fortunately, we have a series of historical facts which enable us to follow, almost step by step, the interesting process by which a people move almost 625 miles (1,000 km.) from their original home and gradually invade an extensive plain, which they settle without violent struggle or population displacement. This ethnic replacement was accompanied by a process of adaptation and fusion, through which a population that originally possessed an Andean culture was transformed, doubtless by the impact of a new environment, into a people who lived on cattle raising, collecting wild foods, and pillage.

The *Araucanians* were the native peoples of Chile, dwelling originnally in the plains between the Andes and the sea, south of the *Atacama*. Father Luis de Valdivia, the first to write a grammar and lexicon of their language, gives in his book published in1606 a good delineation of the area which *Araucanian*-speaking Indians then inhabited. In addition to stating that "in the entire realm of Chile there was no other language," he added that the *Araucanians* extended from Coquimbo, in the north, to Chiloé in the south, and "from the foot of the great snowy Cordillera to the sea." According to this and other early records, the habitat of the native *Araucanians* did not include the Cordillera but was within the limits indicated above.

East of the Cordillera distributed from north to south in what is today Argentine territory, and partly in the Cordillera itself, were three close neighbors of the *Araucanians*. These were distinct peoples, who were related to one another and belonged to the same linguistic group, the *Huarpe-Comechingón*. They differed from the people of Chile in appearance, language, and culture. We are especially interested in the southernmost of these non-*Araucanian* peoples, who, because they dwelt in the Andean region of pine groves, were commonly called *Pehuenche* (in *Araucanian*, pehuen, "pine,"+che, "people"). This group of mountaineers was the first to be *Araucanized*, that is, it was the first of those to the east of the *Araucanians* which received their influence and infiltrations.

Numerous facts, in addition to language, already mentioned, clearly prove that the inhabitants of the pine forests, though later *Araucanian*, did not originally belong to this group. Thus, the Chilean chronicler Mariño de Lovera related that a Spanish reconnaissance expedition made in 1563 under the leadership of Pedro de Leiva discovered a type of people in the Cordillera who differed from that of Chile in being taller and thinner and in subsisting on nuts of the Araucaria pine (*Araucaria imbricata*). Later, the Chilean anthropologist, R. E. Latcham, found vestiges of this ancient, tall, and dolicocephalic population both among the short brachycephals who inhabited the region toward the end of the last century and in ancient burial grounds in the same area.

This earliest tall, thin, dolicocephalic people, who neither spoke *Araucanian* nor cultivated the soil, and whose ancient habitat coincides approximately with that of the Araucaria pine, i. e., the Cordillera between lat. 37° and 40° S., was the first to be *Araucanized.* This process must have begun in the middle of the 17th century, as we can clearly see from the records of a famous criminal trial held in Mendoza in 1658. On this occasion, some captured *Pehuenche* who testified under oath, spoke only their own language and had no knowledge of *Araucanian,* but the names of some chiefs and certain cultural elements were already characteristic of the *Araucanians.* This elemental process of *Auracanization* must have terminated toward the end of the same century, for according to the 18th-century documents, the *Pehuenche* already spoke the *Araucanian* language. Jerónimo Pietas (1846), e. g., attests this in his "Costumbres de los Araucanos."

The *Araucanians* were led to influence the people of the Cordillera and later of the eastern plains as a result of their war against the conquistadors. From the beginning, the Indians of Chile adopted Spanish war tactics and equipment, especially the horse. To procure horses, which were so important to warfare, they went to the plains of Argentina, which were densely inhabited by these quadrupeds. After the Spaniards abandoned the original Buenos Aires in 1541, they left horses, which multiplied so rapidly in this favorable environment with its abundant herbaceous plains that during the 17th and 18th centuries there were hundreds of thousands of horses in wild herds.

During this period, culture exchange among the indigenous population was intensified: The *Pampa,* or pre-*Araucanian* inhabitants of the plains, gave horses; the *Araucanians,* or inhabitants of Chile, gave textiles and other elements of a higher culture. The *Pehuenche,* who lived amid both, were the intermediaries.

Other geographic factors also facilitated cultural exchange. The Andes in the region of the Araucaria pine, domain of the *Pehuenche,* are relatively low with numerous passes which are open throughout the year. Moreover, the Chilean region opposite the *Pehuenche* habitat had the greatest concentration of *Araucanians* engaged in war; the latter frequently took refuge in the Cordillera. Finally, the territories east of *Pehuenche* were never occupied by the Spaniards, thus leaving the mountaineers free to move at will.

All these reasons brought the continuous *Araucanian* infiltrations first to the *Pehuenche.* Once this people was *Araucanized,* the great expansion on the eastern side of the mountain range began. Its base was the *Pehuenche* region or western part of Neuquén, from which it extended toward the north and the east, gradually occupying the greater part of the Argentine central plain and bordering regions.

The first expansion of the now-*Araucanized Pehuenche* was to the north, and it invaded the southern part of the present Province of Mendoza. This region had been the ancient domain of the *Puelche* de Cuyo, the second of the three previously mentioned non-*Araucanian* peoples who were eastern neighbors of the *Araucanians*. In 1658, they were still masters of their own destiny, for various persons who made statements in the aforementioned criminal proceedings knew only their own language, whereas 100 years later they all spoke *Araucanian*, and only the old people still remembered their ancient tongue. This is what we are told by Father Havestadt, a Jesuit missionary who, in 1750, visited Malargüé, the principal center of these ancient people. After that date, the *Puelche* de Cuyo disappeared as an ethnic entity, to be transformed into a mere subdivision of the *Araucanized Pehuenche*.

The second expansion was to the east. Documents point to its presence north of the Pampean region in 1708. In this same year, at a meeting of Indians of different origins held at Las Pulgas near what is called today Villa Mercedes, on the Río Quinto, some Indian chiefs who were not yet *Araucanized* had brought to the council "Aucáes Indians or Indians of the War of Chile." At that period, the *Araucanians* on the eastern side of the Andes were known as *Aucá* (*Araucanian* for enemy, traitor, or contrary), or "uprisen."

A year later, in 1709, they were also found in the region east of the Pampa. It is stated in an official document that one of the expeditions that went south from Buenos Aires every year in search of salt had met with a great number of *Aucá* who were taking large herds of cattle and horses toward Chile. Some weeks later, at the meeting of the "Cabildo" de Buenos Aires, held on February 10, 1710, it was stated that a great number of the *Aucá* Indians from the Chilean Cordillera went to the plains to steal cattle.

At first, these visitors limited themselves to exercising their influence upon the pre-*Araucanian Pampa* of the plains and to carrying off the wild cattle. But soon they attacked the Spanish settlements and committed all kinds of depredations against stock farmers in the vicinity of Buenos Aires. In 1715, the presence of *Serrano* is noted. *Serrano* was the common term for the Indians of the Cordillera, that is, the *Araucanized Pehuenche*. Ten years later, it was suggested that an expedition be sent from Buenos Aires "in order that the *Aucáes* and *Serranos* who inhabited the vicinity of the city be driven out." Thus, we can establish 1725 as the approximate date in which the *Araucanians* were definitely established in the great plains.

Once these *Araucanians* were established among the primitive *Pampa* they were the most dynamic element, and rapidly became the dominant one. That is why the Englishman, Father Thomas Falkner, could state in his well-known "Description of Patagonia" (1774) that his experience as missionary in the Jesuit settlements south of Buenos Aires showed that the *Araucanian* language "was the most generally understood" among the Indian populations of the plains.

In this period, a small group of *Pampa* still spoke their native language, but later this speech disappeared under the *Araucanian* avalanche that descended from the Cordillera. By the end of the same century, the *Araucanians*, who had at first infiltrated among the *Pehuenche* living in the mountains, controlled all the extensive area between the vicinity of Buenos Aires, Córdoba, San Luis, and the Río Negro, between the Cordillera and the sea.

In their immense territories, the newly arrived *Araucanians* were split into various distinct and frequently rival groups. They never formed states, for their social organization was not stratified, and they lacked permanent homes. But real dynasties of chieftains who succeeded each other were developed, and some of them became permanently established in definite places.

It is clear that these more or less rival groups, consisting of seminomadic Indians, had no definitely bounded territories that separated one from the other. Moreover, the number of chieftainships was changeable. Each chief with his people was subject to a higher chief. If dissatisfied with his superior, he took his movable tents and became the subject of another, or he himself became an independent chief.

Three of these chieftainships, however, were permanent, doubtless because they were based on the distinct physiography of the land. The first was that of the *Pehuenche*, who, in the latter part of the 18th century, were pressing toward the northeast, and at the beginning of the 19th century inhabited not only the Cordillera proper but all the territories east of the Andes to the Chadileuvú or Salado River, between the Diamante River on the north and the Limay River on the south.

The second group, located east of the first, occupied the western side of the Pampa, commonly called "región del monte" because of its xerophytic vegetation. The *Araucanians* called it Mamüll-Mapú, the "woody region." Its inhabitants were known as *Ranquel* (in the *Araucanian* language, rankul means a field of common reed grass). Its more permanent center, where the general chief lived, was a place called Leubucó, long. 64° 40′ W. and lat. 35° 50′ S.

Finally, the third group inhabited the region commonly called the humid Pampa (Pampa húmeda) or herbaceous Pampa, which is the eastern part of the plains. Because of their habitat, these Indians were often called *Pampista* or just *Pampa*, but they should not be confused with the true *Pampa*, who occupied this region previous to the *Araucanians*. The principal headquarters of these natives was the Salinas Grandes zone near Macachín, which lies in the present territory of La Pampa.

As the fundamental factors in the fusion and adaptation of elements were almost the same throughout the area inhabited by the Argentine

Araucanians, the results should everywhere be identical or similar. Considering the *Araucanian's* manner of living, the century and a half of their occupation of the territory east of the Andes was not sufficient time for them to become differentiated. The different groups of eastern *Araucanians* remained very similar to one another in their physical appearance as well as in their culture and language.

We lack exact anthropometric data on the Argentine *Araucanian* stature, but according to different historical sources they were of a "medium" stature, that is, an average height of 5.4 to 5.6 feet (1.65 to 1.70 m.). This is understandable because they were the result of the mixture of the short *Araucanians* of Chile with the taller *Pehuenche* and the other Pampa tribes.

According to craniological measurements published by Ten Kate (1893), the majority (80.6 percent) of the *Araucanians* from the plains are brachycephalic like those of Chile, and 19.4 percent are dolicocephalic like the old *Pampa.* This is as would be expected.

Their culture was also of mixed origin. Features of *Pampa* origin included their lack of cultivation of the soil; use of the classic skin toldo; the bolas (boleadora) as the principal weapon, together with the spear; their diet of half-raw mare meat and hot blood, and their mythology and the name of their spirit of evil, Gualichu. From Chile came men's and women's garments, ornaments, weaving, silverwork, wooden plates, spears up to 16 feet (5 m.) long, part of their social organization, and some funeral practices.

Finally, their language differed from that of Chile in certain peculiarities, such as their tendency to change the *r* into *s* and the *t* into *ch.*

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PART 4. THE NORTHERN ANDES

THE ARCHEOLOGY OF ECUADOR

By DONALD COLLIER

GEOGRAPHICAL ENVIRONMENT

Ecuador, like Perú to the south, includes three distinct regions: the Coast, the Sierra, and the Oriente, or Montaña—the jungle region to the east of the Andes (map 1, *No. 15*). With the exception of arid stretches in the Provinces of Guayas and Manabí, the Coastal region is humid and has a tropical flora and fauna. Although ocean winds cool the land a few kilometers back from the shore, farther inland the climate is hot. The Coastal plain is cut by numerous rivers that rise in the well-watered western slopes of the Andes. Apparently these rivers were navigated in prehistoric times by canoes and balsa rafts, as they are today by motor launches, and they were paths of contact with the Sierra.

The Highland region consists of a series of intermontane valleys lying between the western and eastern Andean ranges, and separated from one another by high grass-covered nudos or plateaus which often rise to snow-covered peaks. These valleys average 2,500 meters (about 8,000 ft.) in elevation, and have a cool climate and a moderate rainfall. Several of the valleys draining to the west, however, notably the Guallabamba, Jubones, and Catamayo, are considerably lower and have a subtropical climate except in their upper reaches. It was especially by way of these latter valleys, apparently, that contacts were made between the peoples of Highland and Coast.

The eastern jungle is humid and tropical, and is drained by the many rivers that rise in the Andes. Travel other than by water is extremely difficult, and probably in prehistoric times settlements were confined largely to areas near the rivers, as is the case today.

NATIVE TRIBES

At the time of the *Inca* conquest of Ecuador during the latter half of the 14th century, the principal mountain valleys were inhabited, according to early Spanish sources, by a number of distinct tribal groups. These were, beginning in the north, the *Pasto*, *Cara*, *Panzaleo* (*Quito*), *Tungurahua*, *Puruhá*, *Cañari*, and *Palta*. On the

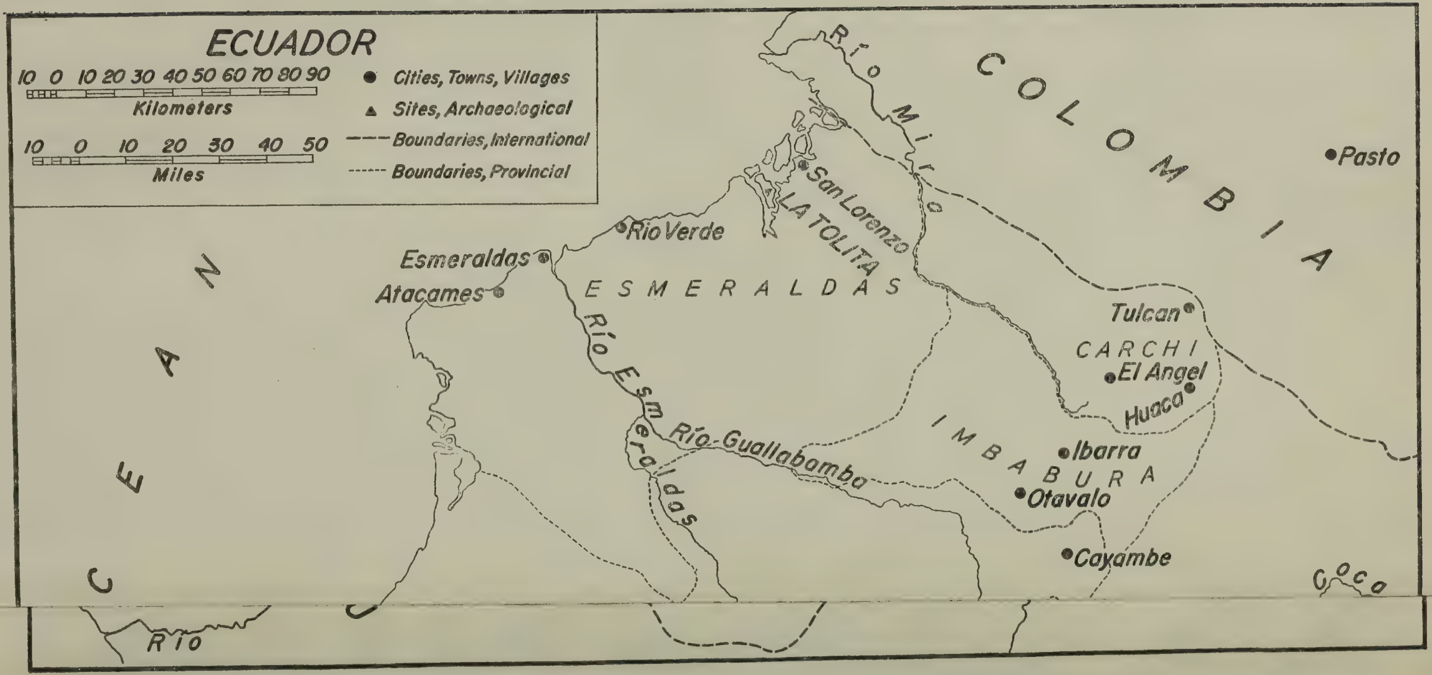
Coast, from north to south, there lived the following tribes: *Barbacoa*, *Esmeralda*, *Manta*, *Huancavilca*, *Puná*, and *Tumbez*. We are told that the eastern base of the Andes was inhabited by some five distinct groups of Indians, the best known of which is the *Jívaro* in the south. (See Handbook, Volume 3.) A discussion of the historical sources of information on the aboriginal people of Ecuador, and a summary of their distribution and cultural characteristics are given by Murra (this volume, pp. 785–821). As yet the identification of tribal groups with archeological cultures in Ecuador is very imperfect. The few cases of such identification will be mentioned below.

SOURCES AND PRESENT STATUS OF RESEARCH

Before considering the prehistoric cultures of Ecuador, it is useful to examine the nature and extent of existing archeological knowledge of that region. The systematic investigation of Ecuadorean prehistory was initiated by Federico González Suárez in 1878 with his archeological and historical study of the *Cañari* Indians (González Suárez, 1878). His most important further contributions to archeology were a systematic description of the archeological remains of Ecuador (1892) and a study of the aboriginal peoples of Imbabura and Carchi (1910). At the beginning of the 20th century, field work was greatly accelerated. G. A. Dorsey published a report on his excavation on La Plata Island (Dorsey, 1901), Paul Rivet made an extensive ethnological and archeological survey during the years 1901–06 (Verneau and Rivet, 1912–22), and between 1907 and 1909, Saville carried out archeological investigations on the coasts of Manabí and Esmeraldas (Saville, 1907–10, 1909). A full report on Saville's work in Esmeraldas has never been published.

In 1909, another Ecuadorean scholar, Jacinto Jijón y Caamaño, began a series of important archeological investigations. His most extensive excavations were made in Imbabura Province (Jijón y Caamaño, 1914 and 1920) and in Chimborazo, where he established the first stratigraphic sequence in Ecuador (Jijón y Caamaño, 1927). His views based on these and other researches were summarized in a comprehensive article published in 1930 (Jijón y Caamaño, 1930).

In 1920, Max Uhle, at the invitation of Jijón y Caamaño, left Perú to carry out an extensive program of excavation in Ecuador. In the succeeding years he worked in many of the Highland provinces, and in Manabí and Esmeraldas. The results of this research were published in numerous short articles which appeared mainly in the Boletín de la Sociedad Ecuatoriana de Estudios Históricos (subsequently the Academia Nacional de Historia). Unfortunately, during this period, Uhle had become completely absorbed in his theories of the Central America origin of Andean cultures. As a result, he neglected the systematic description of the local archeological manifestations for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Río Miro
San Lorenzo
LA TOLITA
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Esmeraldas
Atacames
ESMERALDAS
Río Esmeraldas
Río-Guallabamba
Tulcan
CARCHI
El Angel
Huaca
IMBABURA
Ibarra
Otavalo
Cayambe
Coca
OCEAN
Río

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MAP 6.—Archeological sites of Ecuador. (Compiled by Donald Collier.)

the more fascinating occupation of pointing out Middle American connections and tracing *Mayan* and *Chorotegan* migrations to the coast of Ecuador. (Cf. bibliography for Uhle's most important papers.)

Recently (1940–43), Edwin N. Ferdon, Jr., carried out an extensive archeological survey, mainly in the Provinces of Guayas, Manabí, and Esmeraldas (Ferdon, 1940, 1940–41), and excavated at a large site at La Libertad, Guayas (1941 a, 1941 b). In 1941, Collier and Murra established a stratigraphic ceramic sequence at Cerro Narrío, Cañar (Collier and Murra, 1943).

Despite the considerable amount of archeological work in Ecuador accomplished in the past 60 years, only the most important part of which has been mentioned in the preceding paragraphs, there remain tremendous gaps in our knowledge of the area (map 6). The entire Oriente, the Provinces of Cotopaxi, Bolívar, Los Ríos, El Oro, and parts of Pichincha, Esmeraldas, and Loja are completely unknown. For the areas where excavation has been accomplished we lack, with a few exceptions, adequate published descriptions of what was found. The problem of stratigraphic cultural sequences has barely been attacked.

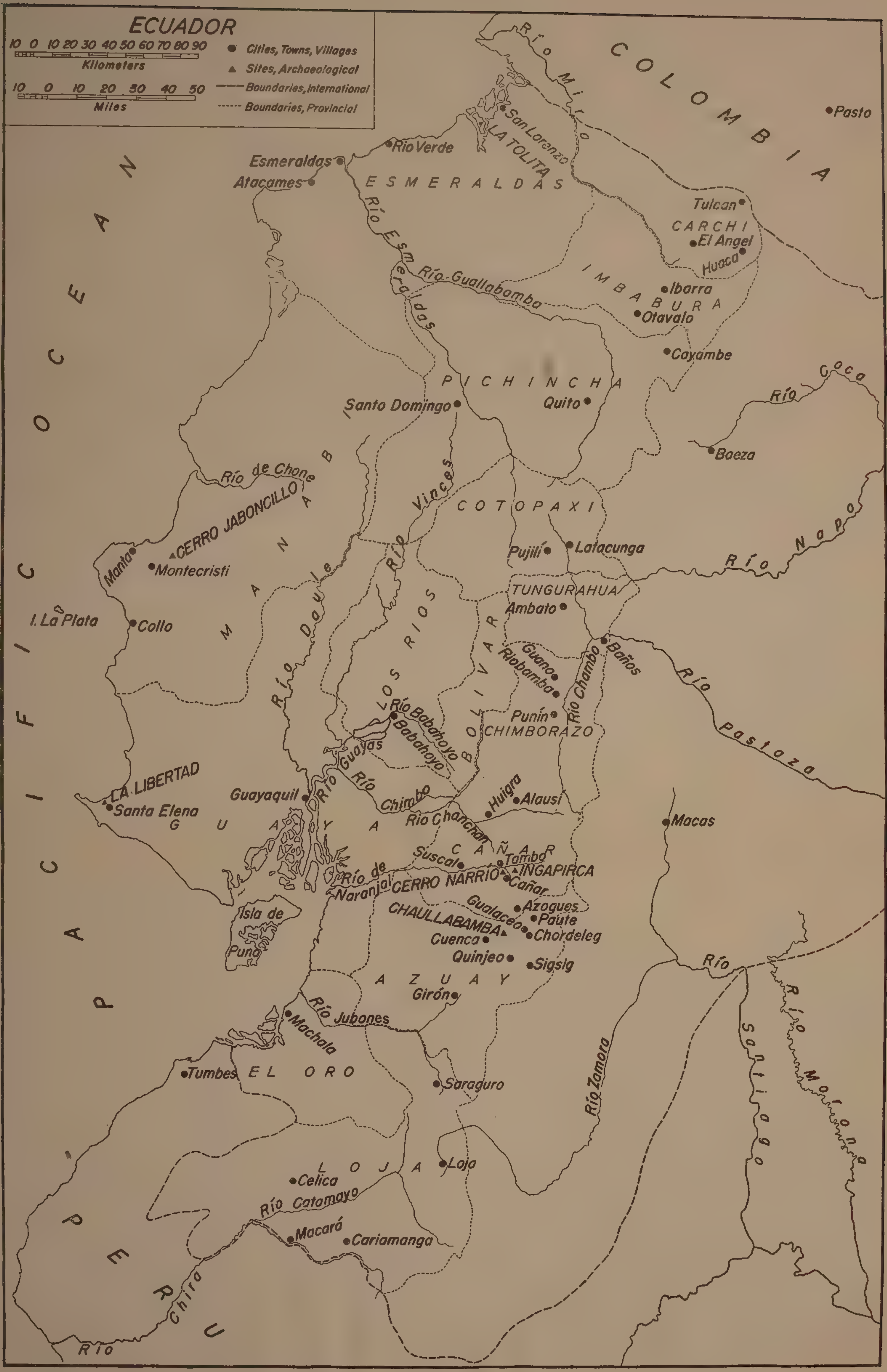
THE HIGHLAND REGION

CARCHI PROVINCE

Distinctive archeological remains have been found in Carchi and in the adjoining portion of Colombia as far north as Pasto. This region has been investigated by Rivet (Verneau and Rivet, 1912–22), González Suárez (1910), Uhle (1928 a, 1933), and Grijalva (1937).

The characteristic prehistoric habitation of the region was a circular structure, locally called a bohio, with thick earthen walls about 4½ feet (1.5 m.) high, and probably with a conical roof of thatch supported by one or more center posts. These houses are usually 15 to 30 feet (5 to 10 m.) in diameter, but sometimes are as much as 125 feet (40 m.) across. They are found irregularly arranged in groups of 20 to 80 houses.

Carchi is famous for its elaborate tombs. The most interesting forms have been well illustrated by Verneau and Rivet (1912–22, pp. 115–23). In many cases, a single tomb is excavated in the center of the floor of a bohio, while in others there are several tombs in various parts of the house floor. In other places, as at El Ángel, the tombs are in a separate cemetery located near a group of bohios. In simplest form, these tombs consist of a circular shaft about 4½ feet (1.5 m.) in diameter and 6 to 15 feet (2 to 5 m.) deep, at the bottom of which is a lateral niche containing a single body. Some tombs containing multiple burials are as much as 8 to 9 feet (2.5 to 3 m.) in diameter and 26 to 33 feet (8 to 10 m.) deep, and have niches in the walls at various heights and a larger niche at the bottom. There may be a series of


ECUADOR
10 0 10 20 30 40 50 60 70 80 90
Kilometers
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Miles
● Cities, Towns, Villages
▲ Sites, Archaeological
—— Boundaries, International
----- Boundaries, Provincial
COLOMBIA
Pasto
Río Miro
San Lorenzo
LA TOLITA
Río Verde
Esmeraldas
Atacames
ESMERALDAS
Río Esmeraldas
Río Guallabomba
Tulcan
CARCHI
El Angel
Huaca
IMBABURA
Ibarra
Otavalo
Cayambe
PICHINCHA
Quito
Santo Domingo
Río Coca
Baeza
OCEAN
PACIFIC
Río de Chone
CERRO JABONCILLO
MANABI
Manta
Montecristi
I. La Plata
Collo
Río Vinces
COTOPAXI
Pujilí
Latacunga
Río Napo
TUNGURAHUA
Ambato
Río Daule
LOS RIOS
BOLIVAR
Guano
Riobamba
Río Chambo
Baños
Punín
CHIMBORAZO
Río Pastaza
Río Babahoyo
Babahoyo
Río Guayas
Río Chimbo
LA LIBERTAD
Santa Elena
Guayaquil
GUAYAS
Huigra
Alausí
Río Chanchan
Macas
CAÑAR
Suscal
Tambo
INGAPIRCA
CERRO NARRIO
Cañar
Río de Naranjal
Isla de Puná
Gualaceo
Azogues
Paute
CHAULLABAMBA
Chordeleg
Cuenca
Quinjeo
Sigsig
AZUAY
Girón
Río
Río Morona
Santiago
Río Jubones
Machala
Tumbes
EL ORO
Saraguro
Río Zamora
LOJA
Loja
Celica
Río Catamayo
Macará
Cariamanga
PERU
Río Chira

595682—46 (Face p. 769)

MAP 6.—Archeological sites of Ecuador. (Compiled by Donald Collier.)

niches radiating from the shaft at the bottom, or several shafts may be joined at the bottom by connecting tunnels, in each of which is a body.

These tombs, most of which have been opened by treasure hunters, contain quantities of elaborately decorated pottery and some gold and copper ornaments. (For illustration of metal objects from Carchi, see Verneau and Rivet, 1912–22, pls. 24 and 25). Gold objects have most frequently been found in graves at El Ángel and Puchúes, and to the east apparently a little gold and copper has been recovered north of the town of Huaca.

There exists no adequate published description of the pottery styles found in Carchi, although some idea of the range can be gained from the illustrations, many in color, of Verneau and Rivet (1912–22, pls. 27, 29–31, 34–35, 39, 41–42, 52, 54–56). Typical forms are globular jars, tall, elongated jars with pointed bottoms, tripod and tetrapod jars, footed bowls and jars, compoteras with short pedestals, and ocarinas. Some jars and all tripods (pl. 157, *g*) are undecorated. Some jars have incised geometric designs, or zoomorphic or anthropomorphic forms modeled on their exteriors. Geometric designs in red over a white or cream slip are found on jars and on compotera interiors, as are negative designs in black over a red or white slip (pl. 157, *d*, *e*, *h*).[1] The red designs on a white slip are found also on the ocarinas. The elongated jars with pointed bottoms, the interiors of some compoteras, and some jars have negative designs (black) on a light slip with red over-painting (pl. 157, *a-c*, *f*, *i*)—the Tuncahuán style of Jijón y Caamaño (see p. 772).

There is great confusion concerning the associations of the pottery styles of Carchi with one another and with other cultural features, and their chronological relationships are uncertain. The gold ornaments from El Ángel seem to be associated with pottery of Tuncahuán style, but little else is clear. Uhle (1928 a) has postulated five cultural periods for the area, each based on a single pottery style. This chronology is exceedingly dubious and has been attacked by Jijón y Caamaño (1930, p. 140, note 1; p. 141, note 1) and Grijalva (1937). Jijón y Caamaño has pointed out that some of the pottery from his Period I in Imbabura is very similar to pottery from Uhle's Period II at Cuasmal in Carchi, and that an ocarina of the type pertaining to Period III at Cuasmal has been found in an immediately pre-*Inca* horizon in Imbabura. Grijalva has recorded the finding of *Inca* pottery in the bohios of Period III at Cuasmal, and has presented evidence that Cuasmal was occupied in the 16th century, although Uhle believed the occupation of Cuasmal was pre-Tiahuanaco in time. It is clear that a reliable chronology for Carchi has yet to be established.

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[1] *Explanation of Plate 157:*

Pottery from Carchi. *a*, Tuncahuán style, El Ángel (height 27½ inches (70 cm.)); *b*, Tuncahuán style, El Ángel (height 24⅝ inches (63 cm.)); *c*, Tuncahuán style, El Ángel (height 30⅝ inches (78 cm.)); *d*, from Huaca (diameter 6⅜ inches (16 cm.)); *e*, from Tulcanquer (diameter 7⅛ inches (18 cm.)); *f*, Tuncahuán style, Huaca (diameter 7½ inches (19 cm.)); *g*, from El Ángel (height 6¾ inches (17 cm.)); *h*, from El Ángel (height 4 inches (10 cm.)); *i*, Tuncahuán style, El Ángel (height 16½ inches (42 cm.)). (After Verneau and Rivet, 1912–22, pls. 54, *3;* 55, *4* and *5;* 29, *5* and *8;* 31, *8;* 39, *12;* 27, *13;* and 52, *5*.)

IMBABURA PROVINCE

Imbabura and the adjoining parts of Pichincha comprise the only region in Highland Ecuador with mounds (tolas). On the basis of his extensive excavations in the vicinity of Urcuquí (near Ibarra) and at Quinché in northeastern Pichincha, Jijón y Caamaño (1914, 1920) has established for the area an *Inca* Period and three pre-*Inca* Periods.

The pottery of the earliest period (Period I) consists of deep bowls, jars, tripods, and bottles. Some vessels bear a red slip, others are decorated with a line of bumps around the shoulder or with incised geometric patterns. Most distinctive are vessels ornamented with rays, steps, or other geometric designs painted in a dark color (usually red) on a cream slip.[2] Probably but not certainly the burial mounds of the region are associated with the pottery of Period I.

Period II is characterized by burials in pits unassociated with mounds. The pottery from these burials consists of bowls, jars, tripods, tetrapods, compoteras, bottles, and squash-form jars. It includes a black ware and vessels with red slip. There are vessels with incised geometric designs and with a shoulder-ridge. Common decorations are spirals, triangles, and rhomboids or parallel lines painted in a slightly different tone of the background color. Vessels with zoomorphic or anthropomorphic designs in relief are distinctive.

Period III is characterized by mounds used not for burials but as bases for houses and temples. The pottery forms in this period are bowls, jars, tripods, compoteras, bottles, shoe-shaped vessels, and a distinctive form of cup (timbal) which is interpreted as evidence of *Inca* influence. Black-ware vessels, pots with red slip, and squashlike jars are present. Incised decorations are absent but reticulate designs, parallel lines, and opposed chevrons are painted in the manner of Period II.

The chronological position of the three pre-*Inca* Periods is based on stylistic analysis. Periods II and III are stylistically related. Period I is distinct from the other two and, as it does not fit stylistically between the other two periods, is placed earliest.

TUNGURAHUA-CHIMBORAZO REGION

Jijón y Caamaño, as a result of his extensive excavations in Tungurahua and northern Chimborazo, has postulated for the region seven cultural periods, the chronological relations of which are established on stylistic analysis and some stratigraphic evidence. These periods, beginning with the earliest, are Proto-Panzaleo I and II, Tuncahuán,

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[2] In a later publication (1930, p. 141, note 1) Jijón y Caamaño has stated his belief that this style is related to pottery from Uhle's Period II in Carchi.

Guano, Elen Pata, Huavalac, and *Inca*. The three final pre-*Inca* Periods, which are closely related, are included by Jijón y Caamaño under the general term *Puruhá* and are attributed to the *Puruhá* Indians.

The earliest period, Proto-Panzaleo I, was identified at Macají in Chimborazo (Jijón y Caamaño, 1927, 1: 9–19). This site was a hill containing refuse deposits and houses built of unworked stones set in mud mortar. The pottery consisted of unpainted bowls, jars, compoteras, and tripod vessels decorated with parallel incised lines having a "combed" appearance (fig. 86, *a*). Charred maize, stone metates and manos, and llama and guinea pig bones were also found.[3]

Proto-Panzaleo II, although found in Chimborazo, was best represented at Santa Elena cemetery near Ambato (Jijón y Caamaño, 1927, 1:19–26). The graves were circular pits, 3 to 6 feet (1 to 2 m.) deep, and contained stone metates and manos, and an abundance of pottery. Typical shapes were bowls, jars, compoteras, and tripods. Some of these were unpainted and bore incised designs of the Proto-Panzaleo I type. Others were decorated with simple bands in red or black, or with negative designs (fig. 86, *b*, *c*).[4]

Remains of the Tuncahuán Period were found in Chimborazo at Tuncahuán (near Guano) and at Guano (Jijón y Caamaño, 1927, 1:26–37). Typical shapes in Tuncahuán pottery were bowls, jars, and compoteras (fig. 86, *d*, *e*), but there were no tripods. The manner of painting these vessels is described as follows (Jijón y Caamaño, 1930, pp. 162–64):

> The . . . [pottery] of Tuncahuán is characterized by a peculiar technique—negative decoration with overpaint; that is, the vessels have been ornamented first through a lost color procedure [in black], and then adorned with red, yellow or white transparent paint, often without obscuring the negative design, but frequently making mistakes in covering the negative figures with paint or ignoring these figures completely. . . . when the . . . [overpaint] is applied without ignoring the negative design, its purpose is to complement this design.

Associated with Tuncahuán pottery in a grave was a spear thrower, a tupu, and other ornaments of copper. How extensively metal was used during this period is not clear.[5]

The Guano Period was found at San Sebastián near the town of Guano (Jijón y Caamaño, 1927, 1:37–60). Associated with stone houses with thatched roofs were maize, llama bones, and pottery. Common forms of pottery were bowls, compoteras, tripods with hoja

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[3] Jijón y Caamaño (1930, p. 141) believes that Proto-Panzaleo I has the following distribution in Ecuador: Manabí, Daule Valley (Guayas), and in the Sierra from Tungurahua to Cañar.

[4] Proto-Panzaleo II, according to Jijón y Caamaño (1930, pp. 141–42), is found in Manabí, Imbabura, Pichincha, Cotopaxi, Tungurahua, Chimborazo, and Loja.

[5] Tuncahuán is said to be found in Esmeraldas, Manabí, Charchi, Chimborazo, Cañar, Azuay, and probably in Guayas and El Oro (Jijón y Caamaño, 1930, p. 142). Jijón y Caamaño (1927, 1:121–22) believes that Carchi in the north and Chimborazo in the south were distinct Tuncahuán centers displaying specialized differences in pottery (e.g., the large, elongated Tuncahuán ánforas found in Carchi but not in the south, and short pedestals of compoteras in Carchi as contrasted with tall pedestals in Chimborazo).

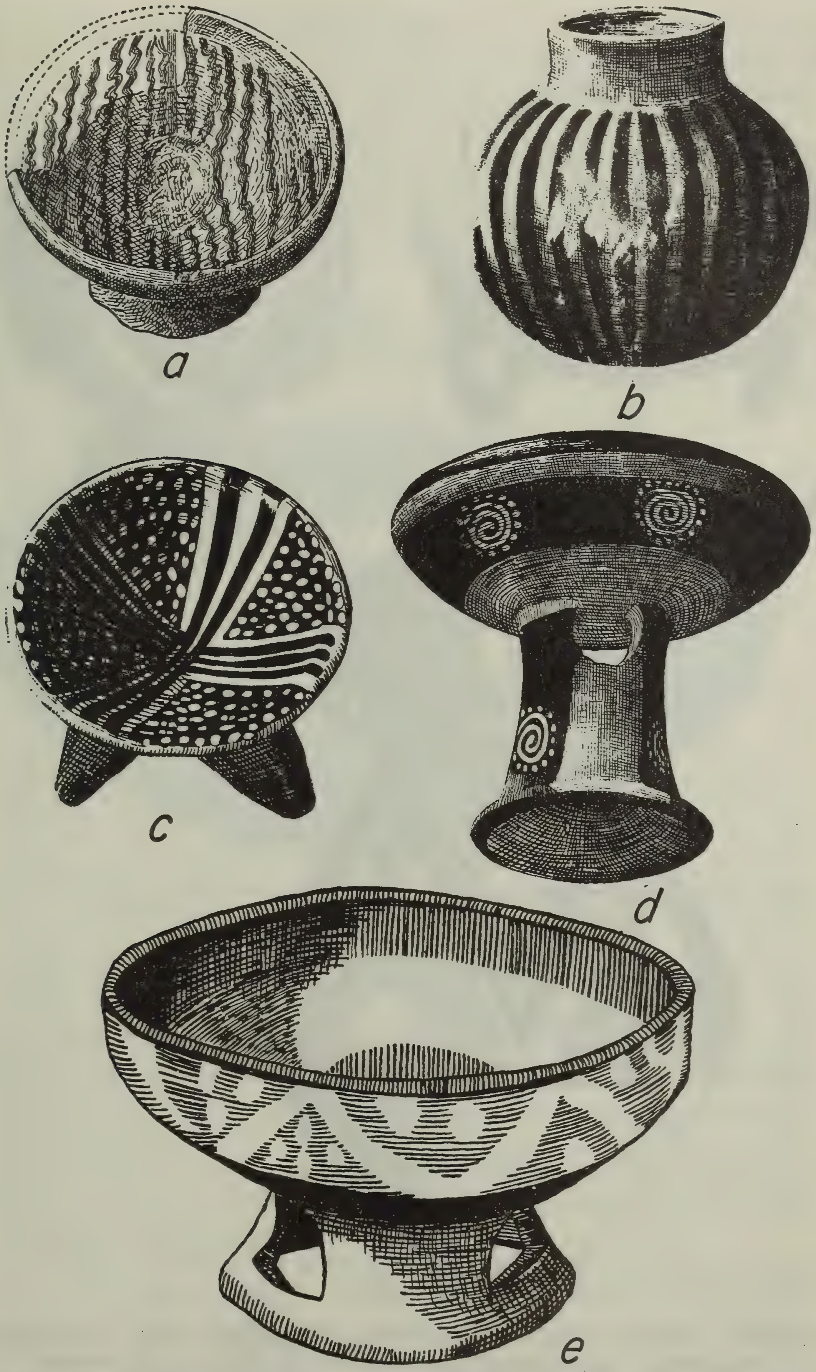

FIGURE 86.—Pottery styles from Chimborazo-Tungurahua region. *a*, Proto-Panzaleo I; *b*, *c*, Proto-Panzaleo II; *d*, *e*, Tuncahuán. (After Jijón y Caamaño, 1927, pls. 10, *2;* 12, *1;* 14, *4;* 22, *bottom;* 24, *bottom.*)

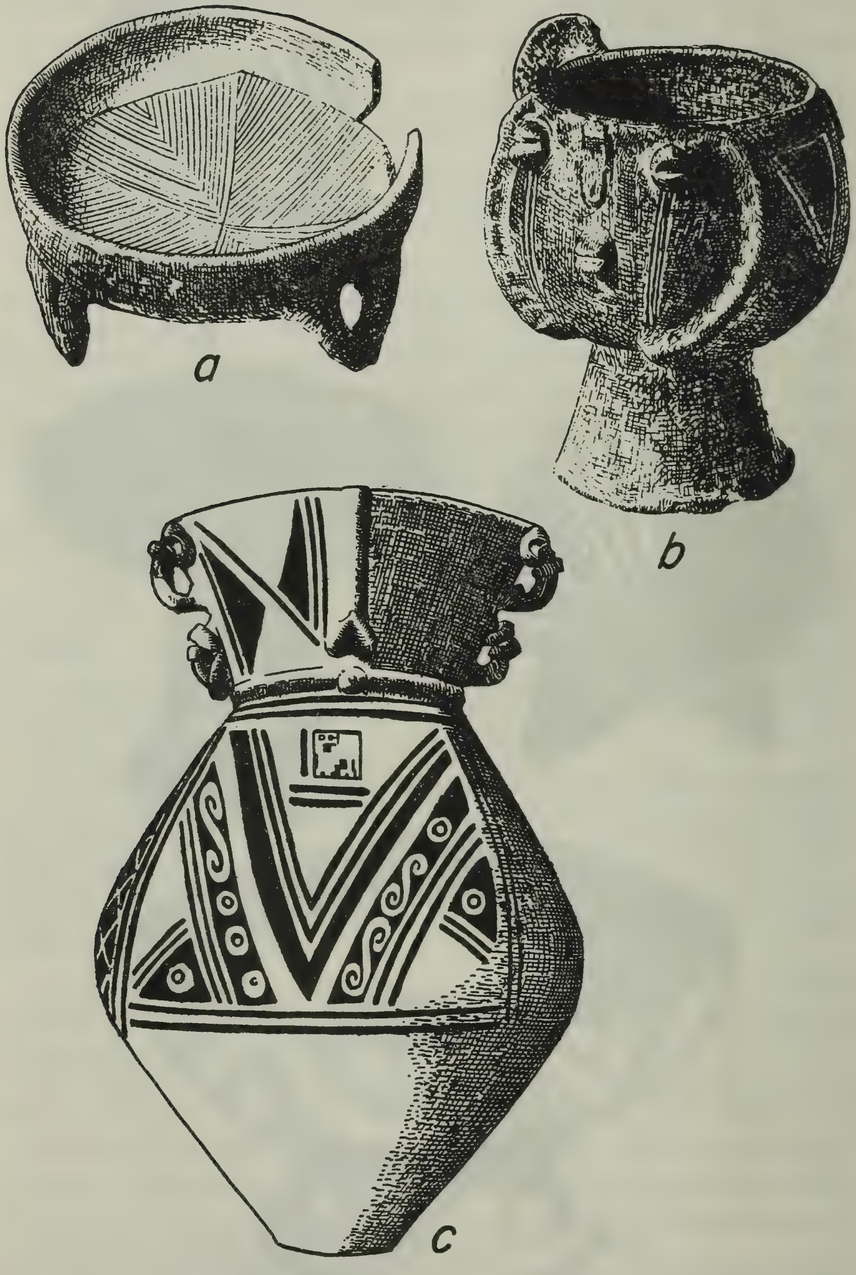

Figure 87.—Pottery styles from Chimborazo-Tungurahua region. *a*, *b*, Guano; *c*, Elen Pata. (After Jijón y Caamaño, 1927, pls. 46, *1*, *4*; 53, *bottom*.)

de cabuya legs, and anthropomorphic jars with modeled faces (fig. 87, *b*). Some plain bowls and jars were coiled, the coils being left unsmoothed. The commonest form of decoration was incising—typical were deeply incised interiors of compotera bowls (fig. 87, *a*).

San Sebastián was a stratified site. The top 32 inches (80 cm.) contained *Inca* sherds, the next 3 feet (1 m.) contained Huavalac pottery, and at the bottom of the deposit were Guano structures and pottery. In the floor of one of these houses were three Tuncahuán sherds.

Remains of the next period, Elen Pata, were found at several cemeteries near Guano (Jijón y Caamaño, 1927, 1:61–147). Elen Pata is placed chronologically between Guano and Huavalac on stylistic grounds (fig. 87, *c*). The following forms of pottery are most common: (1) Large anthropomorphic jars decorated with red and black geometric designs of textilelike quality suggesting garments; (2) small jars with red and black negative painting; (3) compoteras with red and black positive and negative designs on interiors; (4) unpainted tripods with hoja de cabuya legs; and (5) small bowls with one or two lugs on rims, and often with incised geometric designs on exteriors (fig. 88). Found in the burials were copper tupus and a "ceremonial" ax of copper.

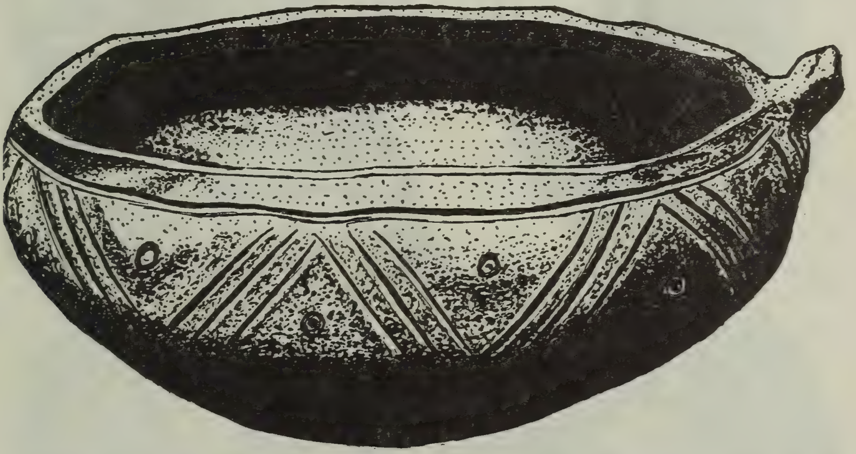

FIGURE 88.—Elen Pata pottery vessel from Chimborazo-Tungurahua region. (Redrawn from Jijón y Caamaño, 1927, pl. 98, *1*.)

The Huavalac Period was found primarily at the cemetery of that name near Guano (Jijón y Caamaño, 1927, 2:149–56). Huavalac pottery appears to be a degeneration of Elen Pata styles. Painted decoration fades out and incising is emphasized. Vertical welts, sometimes notched, on the shoulders of jars are a new decorative device.

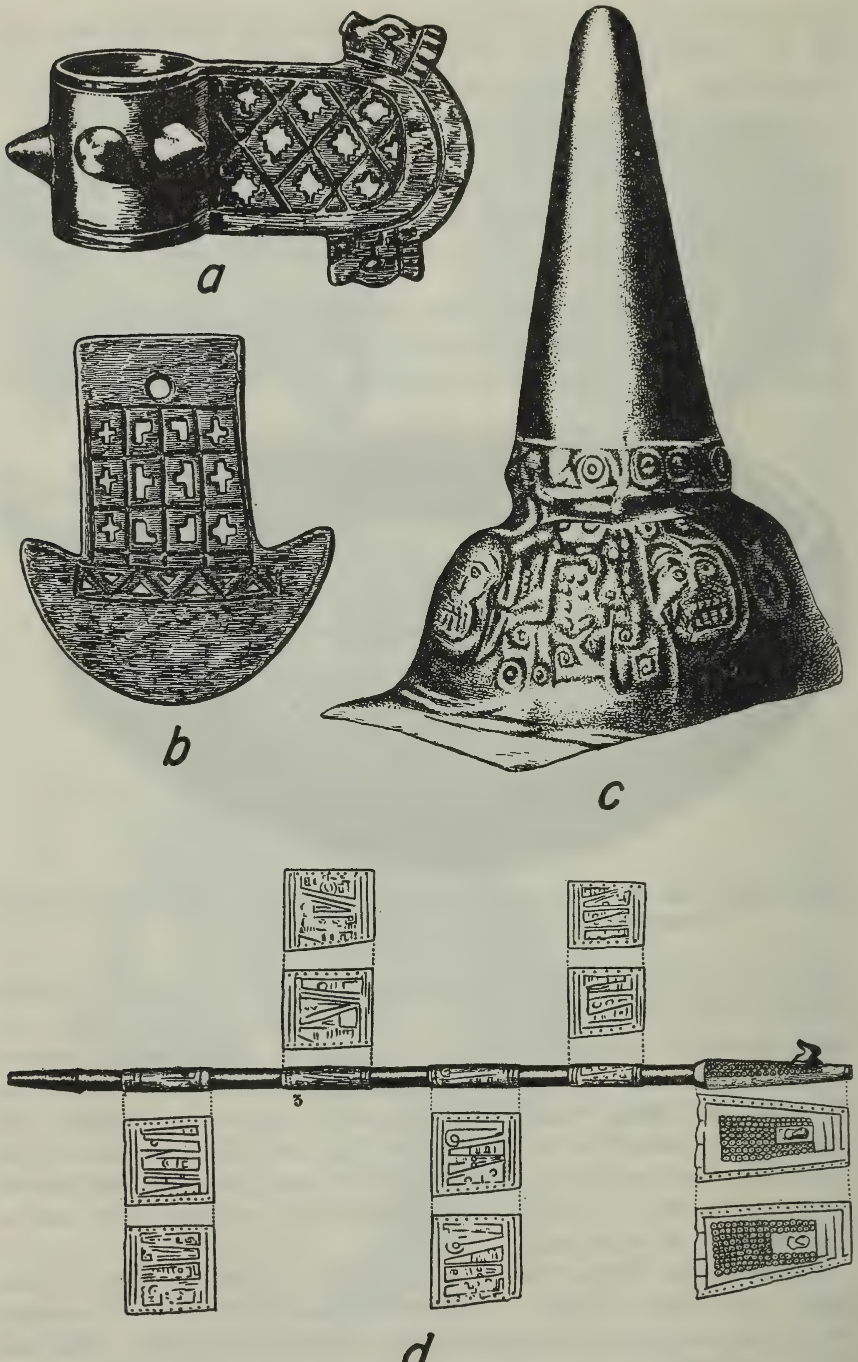

Figure 89.—Gold objects from Azuay. *a*, *b*, Weapons; *c*, headpiece; *d*, spear thrower wrapped with gold plates. (After Saville, 1924 b, pls. 8, *1*, *2*; 6, *2*; and 4.)

In the ceramics of the *Inca* period in Chimborazo are found vessels of pure *Inca* style and Puruhá types showing *Inca* influence.

AZUAY-CAÑAR REGION

At the time of the *Inca* conquest of southern Ecuador during the reign of Tupac Yupanqui, Cañar and Azuay were occupied by the *Cañari* Indians. The influence of the *Inca* can be clearly seen in this region, where they built the large imperial center of Tomebamba, many tambos (inns and storehouses), and Inga-pirca fortress (Verneau and Rivet, 1912–22, pp. 66–113; Uhle, 1923 b; Jijon y Caamano, 1929).

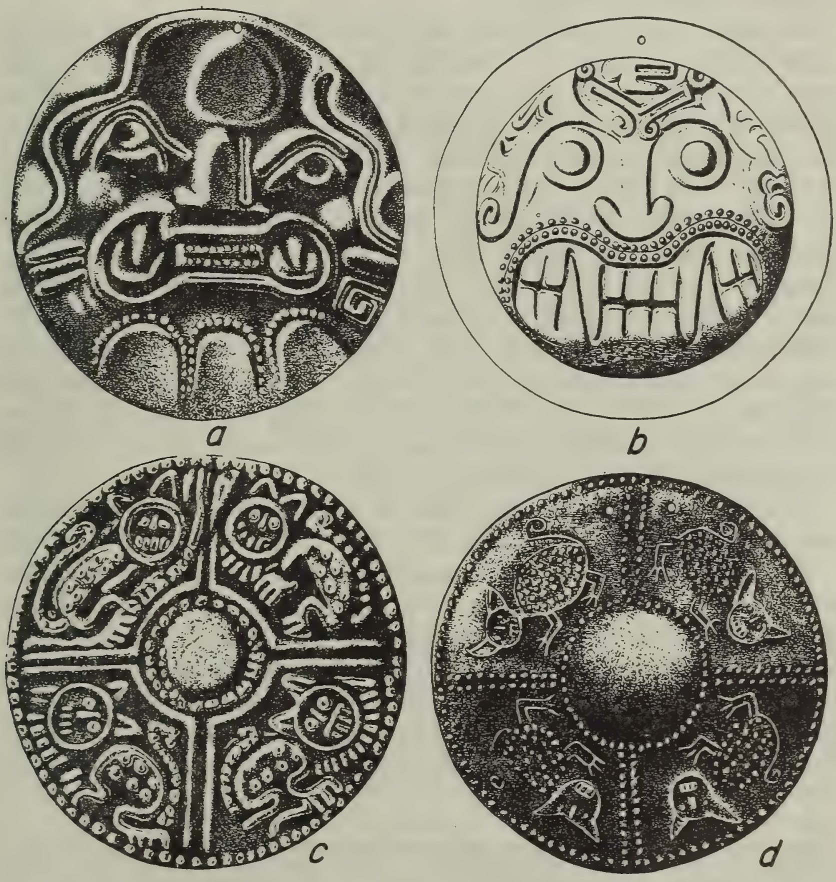

Figure 90.—Gold breastplates from Azuay. (After Heye Foundation, 1924, pl. 5.)

The area is famous in the literature because of the rich and spectacular finds of gold and gilded copper made during the past century in the vicinity of Azogues, Chordeleg, and Sigsig (figs. 89, 90). The gold, which consisted of ornamental plates and disks, headpieces, bells, ear and nose ornaments, batons, and decorations on wooden spear throwers, was recovered from tombs by treasure hunters. A few of these objects found their way into local and foreign collections, but most of them were destroyed. (González Suárez, 1878; Verneau and Rivet, 1912–22, pls. 23–25; Uhle, 1922 a; Saville, 1924 b.) We know almost nothing about their association with other types of cultural remains, including pottery.

The region has yielded a rich variety of red and red-on-buff pottery, often highly polished, and bearing engraved or modeled anthropomorphic forms, as well as engraved geometric designs. Although the pottery is well represented in local collections and has been described and illustrated (González Suárez, 1878, 1892; Verneau and Rivet, 1912–22), very little is known about the associations and chronological relationships of the various types of pottery because of lack of excavation data (pl. 160),[6] Uhle, on the basis of his extensive but cursorily described work (Uhle, 1922 a, 1922 b), has postulated for the area a "Maya" Period, a succeeding Tiahuanaco Period, a post-Tiahuanaco Period which he calls Tacalzhapa or the "culture of the clay seats," and a final pre-*Inca* Period. He believes that there was little use of metal in the "Maya" Period, and that the gold objects date from the succeeding two periods, gilded copper being especially characteristic of the Tacalzhapa Period.

Uhle believed that the first three of these periods were well represented at Cerro Narrío in the Cañar Valley (Uhle, 1922 b; 1931, p. 39).

The stratigraphic testing of Cerro Narrío and nearby sites by Collier and Murra (Collier and Murra, 1943) revealed there an Early Period (Early Cerro Narrío), and a Late Period (Late Cerro Narrío) which merged into *Inca* (pl. 159).[7] Early Cerro Narrío is characterized by very fine red-on-buff jars and hard, highly polished red bowls and plates. For Uhle both of these wares were diagnostic of his "Maya" Period. In Late Cerro Narrío there was a fading out of Early types, a general coarsening of the pottery, the introductión of new forms, such as the tripod with hoja de cabuya legs and the compotera (pedestal bowl or dish), and the appearance of gold and gilded copper. The clay seats, which Uhle used to characterize his post-Tiahuanaco Period, fall into Late Cerro Narrío, although they are not particularly characteristic of the period. There was no clear break between the two periods at Cerro Narrío but a gradual transition, with a basic pottery ware lasting throughout the occupation of the site. No evidence of Tiahuanaco influence was found.

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[6] *Explanation of Plate 160:*

Pottery from Azuay Province. *a*, Cullca, near Cuenca (height 6½ inches (16.5 cm.)). *b*, Paute (height 4¾ inches (12 cm.)). *c*, Paute (height 7⅛ inches (18 cm.)). *d*, Exact provenience unknown (height 4¾ inches (12 cm.)). *e*, Exact provenience unknown (height 6⅞ inches (17.5 cm.)). *f*, Paute (height 5⅞ inches (14.7 cm.)). *g*, Two views of Janus jar, Cojitambo (height 5⅜ inches (13.5 cm.)). *h*, Exact provenience unknown (height 5¾ inches (14.5 cm.)). (*a-c*, *f*, *g*, After Verneau and Rivet, 1912–22, pls. 53, 50, 52; *d*, *h*, Durán Collection, Cuenca; *e*, Cordero Collection, Cuenca. *d*, *e*, *h*, By courtesy Chicago Natural History Museum.)

[7] *Explanation of Plate 159:*

Cerro Narrío pottery. *a*, Narrío red-on-buff Fine jar, Early Cerro Narrío Period (diameter 7½ inches (19 cm.)). (Arriaga Collectión, Cuenca.) *b*, Narrío red-on-buff Fine jar, Early Cerro Narrío period (diameter 4¾ inches (12.2 cm.)). (After Uhle, 1922 b, fig. 26.) *c*, Cañar Polished bowl, Early Cerro Narrío Period (diameter 4⅞ inches (12.5 cm.)). *d*, Cañar Polished bowl, Early Cerro Narrío Period (diameter 6½ inches (16.5 cm.)). *e*, Glossy Red Engraved bowl, intrusive in Late Cerro Narrío Period (height 5¾ inches (14.5 cm.)). *f*, Glossy Red Engraved cup, intrusive in Late Cerro Narrío Period (height 5⅜ inches (13.5 cm.)). *g*, Cañar Polished bowl, Early Cerro Narrío Period (diameter 4⅞ inches (12.5 cm.)). *h*, Narrío Gross storage jar, Late Cerro Narrío Period (height 29⅞ inches (76 cm.)). *i*, Narrío red-on-buff jar, Late Cerro Narrío Period (diameter 5⅜ inches (13.5 cm.)). *j*, Narrío red-on-buff jar, Late Cerro Narrío Period (diameter 6⅜ inches (16 cm.)). (Courtesy Chicago Natural History Museum.)

Intrusive in the Late Period at Cerro Narrío were two groups of ceramics. The first group, which was apparently slightly earlier in time than the second, included red and black pottery with engraved geometric designs and fragments of quartz-studded graters made of pottery. This complex has been found to the east at Macas and to the north at Alausí and resembles certain types from Manabí and Esmeraldas. The second and later intrusive group included *Puruhá* wares, typical of Chimborazo to the north, and Tuncahuán wares found in Chimborazo and still farther north.

Inca artifacts and evidence of *Inca* influences were found in direct association with the Late Cerro Narrío complex. Since only the *Cañari* are reported as occupying the Cañar Valley when the *Inca* arrived, it is reasonable to suppose that Cerro Narrío pottery and artifacts were manufactured and used by the *Cañari*.

LOJA PROVINCE

South of the town of Loja this province is archeologically unknown. The northern part of the province has been investigated superficially by Rivet (Verneau and Rivet, 1912–22, pp. 113–15), who described a number of *Inca* ruins, by Uhle, and by Collier and Murra (Collier and Murra, 1943, pp. 30–34). There is a clear *Inca* horizon in Loja. A number of prehistoric occupations have been postulated on the basis of very scanty evidence. Uhle (1922 b, pp. 206–07) has stated that his "Maya" Period (Early Cerro Narrío) is represented in Loja. Collier and Murra were unable to find any evidence of this complex south of the Jubones River.

It has been thought also that the Proto-Panzaleo II Period (Uhle, 1927 a, p. 111; Jijón y Caamaño, 1930, pp. 141–42) and the Tuncahuán Period (Jijón y Caamaño, 1927, 1:91; 1930, p. 179) are represented in Loja. The presence of a Tiahuanaco Period has also been asserted (Jijón y Caamaño, 1927, 1:134; Uhle, 1920 b, p. 52, note). Published evidence for these assertions is insufficient or lacking.

Collier and Murra found crude utilitarian pottery of local character at several sites in Canton Saraguro, and a distinctive group of painted wares in the Catamayo Valley. It is not possible at present to tie up these local ceramics with pottery from areas to the north or south. It has been suggested that the Catamayo pottery is of *Palta* manufacture, but there is insufficient evidence to connect *Palta* with any archeological manifestation.

THE COASTAL REGION

The Coast of Ecuador is less well known archeologically than the Sierra. Circular and pyramidal mounds, the purpose of most of which is not known, are found over most of the region. Large mounds are known to occur in El Oro, but otherwise this province is an archeological blank. Mounds and other evidences of prehistoric human occupation are abundant in Guayas, and local collectors have been active, but little of a systematic nature has been published on this province. The extensive material excavated by Carlos Zevallos Menéndez, of Guayaquil, in Guayas and on the Island of Puná is as yet unanalyzed and unpublished. Ferdon's preliminary report (1941 b) on his excavations in a large refuse deposit at La Libertad, Santa Elena Peninsula, reveals little, as it was published before a pottery analysis and classification had been made.

MANABÍ PROVINCE

The hilly region in the vicinity of Manta was explored and described by Saville (1907–10). This locality is well-known for the abundance of unique stone seats found there. These U-shaped seats are supported by pedestals carved in the form of crouching animals or human figures (pl. 158, *a*, *b*). The seats, as well as stone bas-reliefs (pl. 158, *c–e*) and columns, were found within or near the numerous stone houses or enclosures, known locally as corrales, that are scattered over the slopes of the hills and in the valleys between. Another feature of the locality are tombs cut, like wells, 6 to 9 feet (2 to 3 m.) deep into bedrock and sealed with a stone cover. Excavated from the house sites were pottery, many beautifully made human figurines of clay (pl. 158, *f*, *h*, *i*), carefully made spindle whorls bearing deeply cut incised designs, and pottery molds and seals. The seats and other stone carvings and corrales are limited to the area between the Río Chone on the north and Collo on the south. The material from this area appears to be related to that found by Dorsey (1901) on La Plata Island, where also was found an *Inca* burial.

Later, Jijón y Caamaño excavated in the Manta region at Cerro Jaboncillo and near the present city of Manta, but he has as yet published only a preliminary account of this work (1930, pp. 132–40). An excavation in a group of corrales revealed the following sequence: *Inca*; Manteño Period (consists of polished black ware with engraved designs, and molded clay figurines); Proto-Panzaleo II. At the foot of one of the earthen pyramids with stone-faced terraces located east of Manta another stratigraphic sequence was found, as follows: Recent pottery; Tuncahuán; Proto-Panzaleo II. Proto-Panzaleo I pottery was found in another mound near Manta. Near the present cemetery of Manta, at shallow depth, was found a polished red ware engraved with curvilinear and geometric designs, which Jijón y Caamaño named Estilo de los Sellos. On the basis of these finds, he has postulated the following chronology for Manabí: Proto-Panzaleo I, Proto-Panzaleo II, Tuncahuán, Estilo de los Sellos, Manteño Period, *Inca* (1930, p. 140). He is uncertain whether the Estilo de los Sellos preceded or followed Tuncahuán, and gives no opinion as to which period the stone seats and other carvings belong, but the Estilo de los Sellos Period or the Manteño Period appear most likely.

ESMERALDAS PROVINCE

In Esmeraldas, also, there are many mounds, mostly circular. The Esmeraldas Coast was surveyed by Saville but he published only a preliminary report (1909). Uhle (1927 a, 1927 b) and Ferdon (1940–41) have also published summaries of the archeological remains on this Coast. The best-known site is La Tolita, on the island of that name at the mouth of the Río Santiago (Ferdon, 1940–41). Here there are 31 more or less circular mounds of varying size (the largest is about 240 feet (75 m.) in diameter and 22 feet (7 m.) high). Some of the smaller mounds were apparently used for burials, while the larger mounds may have served as temple bases. A layer of sherds and other cultural material more than 3 feet (1 m.) thick underlies the mound structures. The lower portion of this stratum is below high-tide mark. A similar phenomenon is observed in relation to cultural deposits on the Coast as far south as the Río Ostiones, suggesting a slight submergence of the Coast in this region. For years, La Tolita has been systematically exploited for the small gold ornaments found in the cultural deposit. In addition to the great variety of gold, platinum, and gilded copper objects,[8] the excavations have produced pottery figurines, pottery vessels of various types (including those painted with scrolls, lines, and dots in black, and a vessel of Tuncahuán style), pottery graters, and manos, metates, and axes of stone.

South of La Tolita numerous large sherd deposits have been reported to be exposed along the wave-cut terraces of the shore, and there are mounds of shell and sherds or of earth back from the shore.

Farther south at Río Verde, pottery painted with red linear decorations on a white or yellow slip has been reported. On the Río Tiaone, an affluent of the Río Esmeraldas, have been found jars with five legs, as well as other vessels painted with wide, curved bands in yellow or red.

In the thick stratum of sherds underlying the present town of

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[8] For a description and metallurgical analysis of metal objects from La Tolita and Atacames, see Bergsøe, 1937 and 1938.

Atacames have been found numerous clay tubes. The lower ends rested in large jars and the upper ends were covered by similar inverted jars. These tubes were apparently associated with burials. Similar tubes have been found at various places on the Esmeraldas Coast.

The clay figurines are probably the outstanding feature of this archeological region. They vary from a few to as much as 12 inches (30 cm.) in height. Many were made in molds but some were evidently modeled by hand. Incised decorations on them are characteristic. Frequent forms are female human figures in a state of pregnancy or delivering a child, and human figures with animal heads. The human figures usually have nose, cheek, and chin ornaments. A figurine type depicting a human head protruding from the open jaws of an animal mask is of special interest. Bird-whistles with holes in the tail are also common.

There appear to be certain differences between the archeological remains of Esmeraldas and Manabí. The seats and elaborate stone carving, as well as stone structures, are absent in Esmeraldas. On the other hand, stone tools appear to be more numerous in Esmeraldas than in Manabí, while the reverse is true of spindle whorls. There seem to be differences in figurines and pottery in general between the two regions, but at present a fruitful comparison cannot be made.

EARLY MAN IN ECUADOR

In 1923, a human skull was discovered in the fossil-bearing stratum near Punín in Chimborazo Province (Sullivan and Hellman, 1925). This stratum contained the bones of the horse, mastodon, and other Pleistocene mammals. The Punín calvarium is of Australoid type and shows significant resemblances to the Lagoa-Santa skull from Brazil. The skeletal remains found by Rivet in caves at Paltacalo in Canton Saraguro (Loja) are also of the Lagoa-Santa type (Anthony and Rivet, 1908; Rivet, 1908). In neither of these finds was there associated cultural material. Uhle (1928 b) has reported a dubious association of potsherds and chipped-stone tools with mastodon bones at Alangasí, near Quito. There seems to be no question that man was present in Ecuador, as in other parts of South America, before the extinction of certain mammalian forms typical of the Pleistocene, but there is at present no basis for assigning an age to this earliest human horizon. (See McCown, Early Man, Handbook, vol. 5.)

CHRONOLOGY AND WIDER RELATIONSHIPS

Jijón y Caamaño has assigned tentative dates to his relative chronology for Ecuador (1927, 2: 182, note 2). He believes that Proto-Panzaleo I and II date from before the beginning of the Christian era, Tuncahuán from 1–750 A. D., and the Puruhá Periods from 750–1450 A. D. Uhle assigns a similar antiquity to Ecuadorean cultures. He

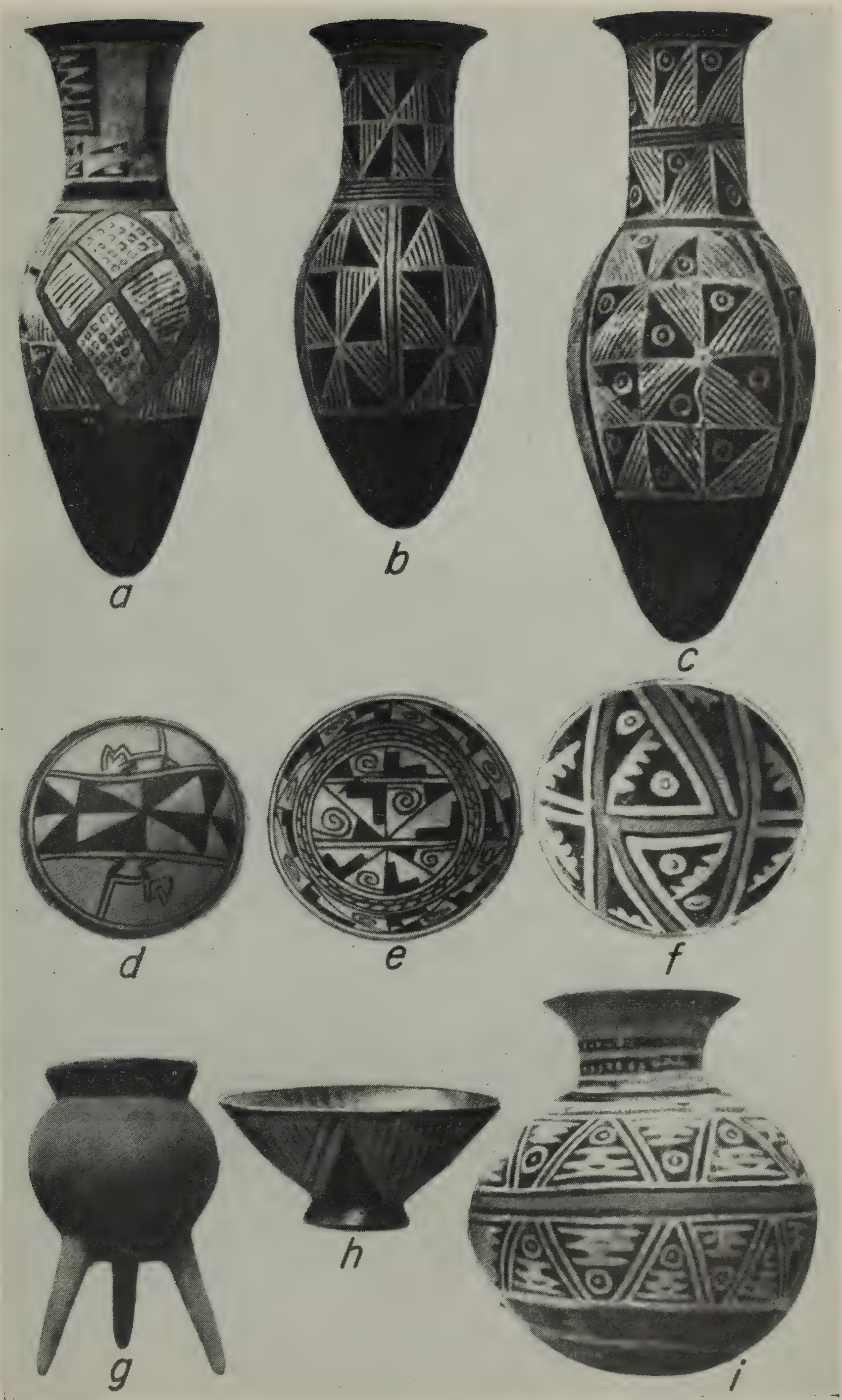


Plate 157.—**Pottery from Carchi.**
(For explanation, see footnote, p. 770.)

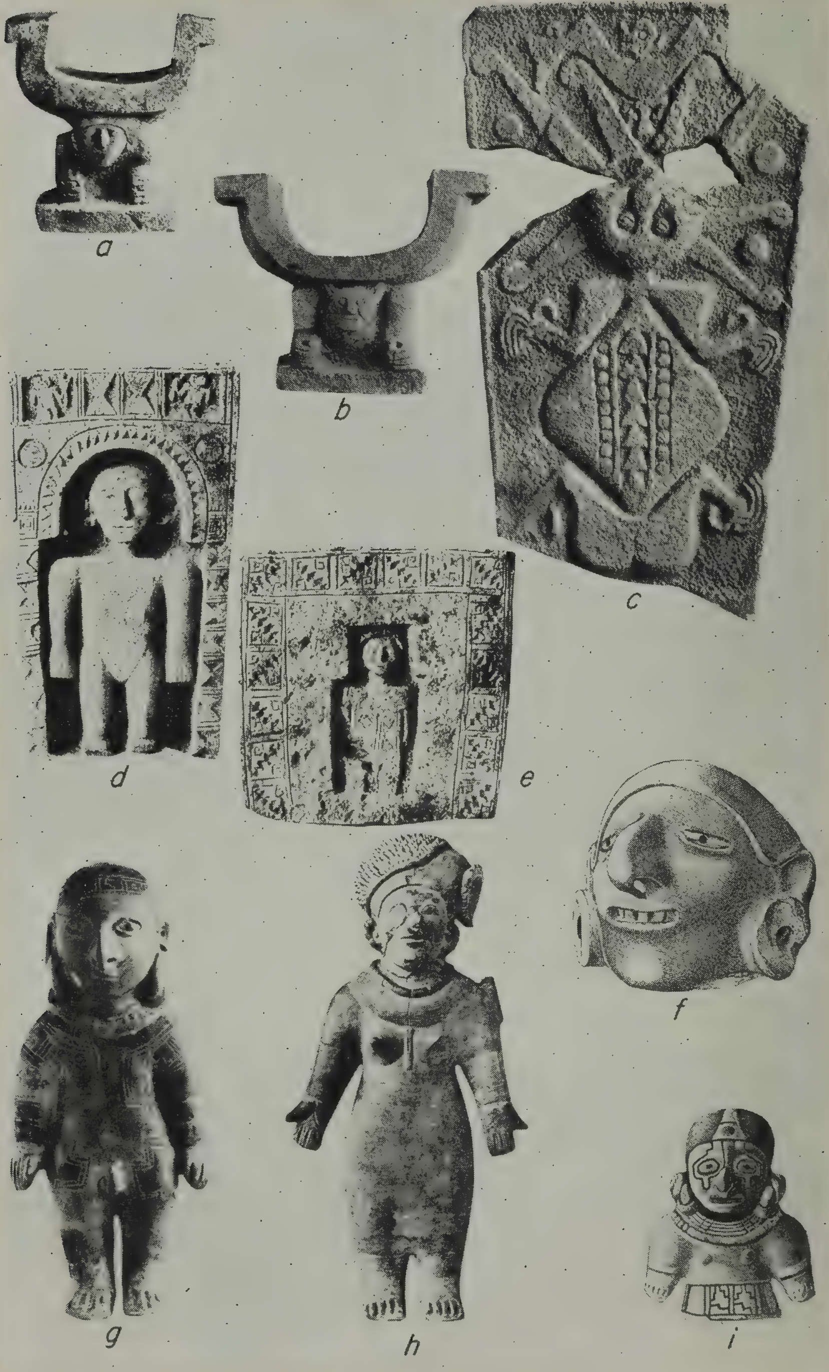
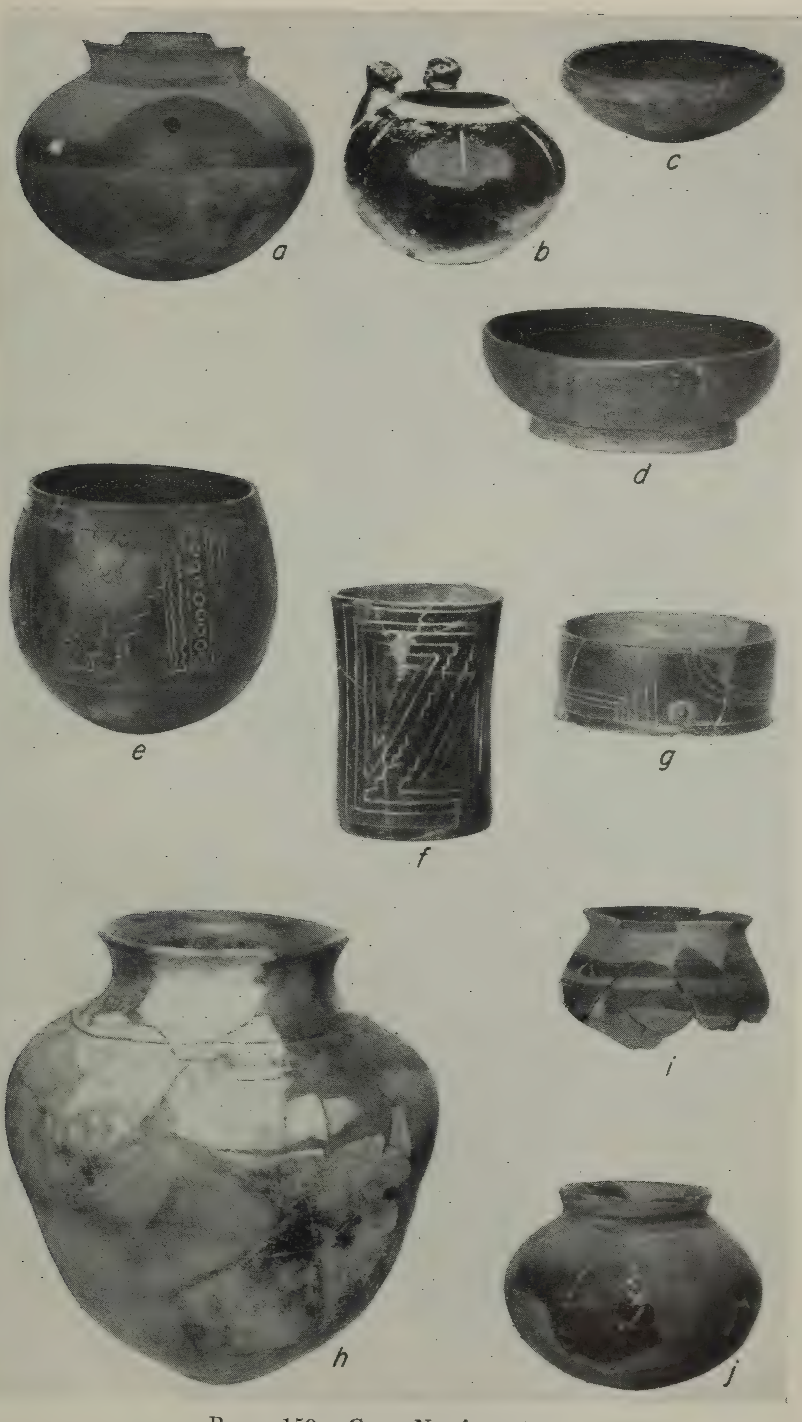


Plate 158.—**Stone sculpture and clay figurines from Manabí.** *a*, *b*, Stone seats, Cerro Jaboncillo; *c*, bas-relief, Cerro Jaboncillo; *d*, *e*, bas-reliefs, Cerro Jaboncillo and Cerro Jupe; *f*, pottery head; g, pottery whistle, Cerro Jaboncillo; *h*, pottery figurine, Caraques; *i*, pottery figurine from Caraques-Cojimies region. (After Saville, 1907–10, pls. 11, *1;* 18, *1;* 38; 56; 54; *1;* 85, *1;* 103, *1;* 110, *9*.)


a
b
c
d
e
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h
i
j

Plate 159.—**Cerro Narrio pottery**

(For explanation, see footnote, p. 778.)

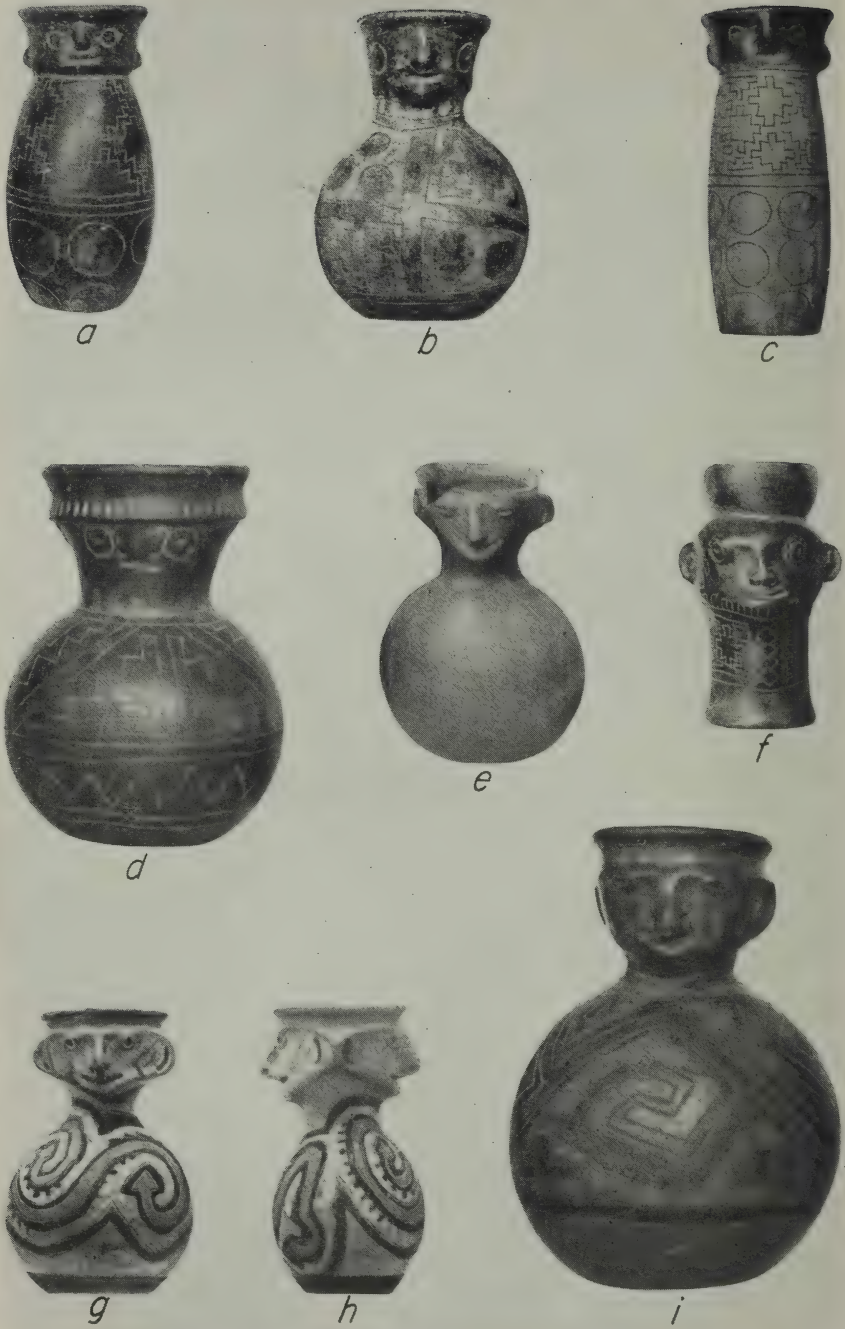

Plate 160.—**Pottery from Azuay Province.**

(For explanation, see footnote, p. 778.)

believes, for example, that his "Maya" Period in Cañar and Azuay is earlier than 500 A. D. On the basis of the stratigraphic sequence at Cerro Narrío it would appear that Uhle's "Maya" Period there (Early Cerro Narrío) is not earlier than 1000 A. D. and may be as late as 1200 A. D. Furthermore, the intrusion in Late Cerro Narrío of Tuncahuán and Puruhá sherds suggests that Tuncahuán and Puruhá if not contemporaneous, were at least close together in time, and that Jijón y Caamaño's dates for Tuncahuán are much too early. There is thus suggested the need for a general chronological telescoping of the cultures of Ecuador. However, it will be necessary to secure a great deal more stratigraphic data on local cultural sequences in various regions before a reliable chronology for the country as a whole can be established. Only then can sound chronological cross-ties be made with Perú to the south and with Colombia and Central America to the north.

Both Uhle and Jijón y Caamaño have attempted to fit the prehistoric cultures of Ecuador into grand schemes embracing the movement of waves of cultural influence (carried by actual migrations of peoples in Uhle's conception) from the Valley of México, the Maya area, and Central America into South America as far south as Perú. All of the high Andean cultures are thought to be of direct Middle American origin. These schemes may be criticized because the comparisons on which they are based are made with a small number of selected elements torn from their context rather than on cultural complexes, because the specific resemblances claimed are often difficult to see, and because of a failure to correlate Andean (i.e., Peruvian) chronology with that of the Maya area. In the light of recent chronological developments in México, the Maya area, and Perú, some of the postulated migrations could not have taken place, or are likely to have taken place in the reverse direction.[9] The most that can be said at present is that the traits held in common by Middle America and the Andean area cannot be explained in terms of a series of cultural waves from north to south only. It appears rather that these cultural resemblances resulted from diffusion in both directions over a long period of time.[10]

Despite the appearance of Late Chimu pottery in southern Ecuador probably as a result of trade, and despite the number of claims of

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[9] For example, Jijón y Caamaño (1930, pp. 162–97) believes that the Tuncahuán style resulted from a blend of Chorotegan and *Mayan* influences reaching Ecuador in the early centuries of the Christian era, and that Tuncahuán in turn gave rise to Recuay in Perú. Certain Tuncahuán-style sherds found intrusive in Late Cerro Narrío (Collier and Murra, 1943, pls. 38, 39) bear negative designs similar to those in the Pachacamac negative style (Strong and Corbett, 1943, fig. 18 and pl. 6), and the latter may have a connection with Recuay. These negative styles appear to be earlier in Perú than in Ecuador, so that if the connection between them and Tuncahuán is real, diffusion of this kind of negative painting must have gone in the reverse direction of that postulated by Jijón y Caamaño. However, the problem is complicated by the fact that negative painting is far more characteristic and frequent in Ecuador and Colombia than Perú.

[10] For discussions of this general problem, see Lothrop, 1940, and Kidder, 1940 a.

Tiahuanaco influence there, Peruvian influences prior to the *Inca* conquest appear to have been surprisingly slight.[11] In general, one has the impression that Ecuador affiliates much more closely with Colombia than with Perú.

The greatest need in Ecuadorean archeology is for more thorough descriptions and classifications of local cultural manifestations and the establishment of additional stratigraphic sequences. When these are available, comparative studies will be on a sounder and more fruitful basis.

BIBLIOGRAPHY

Anthony and Rivet, 1908; Bergsøe, 1937, 1938; Collier and Murra, 1943; Dorsey, 1901; Ferdon, 1940, 1940–41, 1941 a, 1941 b; González Suárez, 1878, 1892, 1908–10; Grijalva, 1937; Jijón y Caamaño, 1914, 1918, 1920, 1927, 1929, 1930; Kidder, 1940 a; Lothrop, 1940; Rivet, 1908, 1912, 1922; Saville, 1907–10, 1909, 1924 b; Strong and Corbett, 1943; Sullivan and Hellman, 1925; Tello, 1943; Uhle, 1920 a, 1920 b, 1922 a, 1922 b, 1923 a, 1923 b, 1927 a, 1927 b, 1928 a, 1928 b, 1931, 1933, 1935; Verneau and Rivet, 1912–22.

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[11] Tello (1943, pp. 154, 158) has identified the Chavín style in ceramics of Uhle's "Maya" Period in southern Ecuador. Apparently he is referring in particular to certain incised or painted curvilinear and step designs on pottery from Azuay (Uhle, 1922 b, pls. 18–24, 36) and to engraved designs on pottery from Alausí. The former style was included by Uhle in his "Maya" Period, which has been identified as Early Cerro Narrío. The latter group from Alausí (Uhle, 1931, pp. 32–33, 35, pls. 1, 3–5; Collier and Murra, 1943, pp. 23–25, pls. 5–7) comprised several pottery types identified by Collier and Murra as intrusive in Late Cerro Narrío (Collier and Murra, 1943, pp. 58–62, 84, pls. 31–34). There is no clear evidence of this late intrusive group south of Cañar (although certain engraved designs on apparently late pottery from Azuay (Collier and Murra, 1943, pl. 9) may be related to it), and its closest affiliations seem to be with the late periods to the north in Manabí. A stirrup-spout jar of Cupisnique type has been found in Azuay (Collier and Murra, 1943, pl. 10), but its exact provenience is unknown and so far it is unique for this region. The present writer is not greatly impressed with the Chavín resemblances claimed by Tello. Furthermore, it is necessary to account for the great time gap between Chavín in Perú and these relatively late pottery styles in southern Ecuador.

THE HISTORIC TRIBES OF ECUADOR

By John Murra

INTRODUCTION

The place assigned to Ecuador in traditional culture-area divisions of the Andean chain is a marginal one (map 1, *No. 16*). Within the territory of this country we find the southernmost extension of *Chibchan*-speaking groups as well as peoples for whom affiliation with the North Coast of Perú has been suggested. In addition, the tribes of Ecuador were the last to be subdued by the *Inca* and as such were never thoroughly integrated within the feudal structure of the Empire.

But we can also think of these tribes as part of an extensive north Andean continuum of native tribes, located between central Colombia and the heart of Perú, which by A. D. 1400 had achieved a high degree of environmental mastery and considerable complexity of social organization. Intensive cultivation of varied crops insured a dependable food supply for a sedentary and numerous population. Regular trade routes, at least along the Coast, facilitated the exchange of ceremonial and utilitarian commodities. Throughout this area, local groups frequently banded together for military conquest and mutual defense in what are known as kingdoms and confederations. Finally, throughout the northwest countries, native peoples had developed a series of artistic forms in various media which testify to interests and skills not found among their Amazonian neighbors. Their degree of social and economic organization as well as technical competence must have been of the kind which, only a very few centuries earlier, had permitted the rise of an unmistakable state structure in the Peruvian Highland. This continuum was interrupted by the *Inca* conquest, and later divergent Colonial and Republican development deepened the cultural gulf between the natives of Highland Ecuador and their neighbors to the north.

Peculiar historic circumstances explain our relatively meager knowledge of pre-*Inca*, pre-Columbian life in this area. The country was obviously poorer, smaller, and less profitable than Perú, and so attracted the interest of fewer conquistadors and chroniclers. The area had been conquered by the *Inca*, and, though the effect of their occupation was not thoroughgoing, it was difficult for the few 16th-century scribes to distinguish between the native substructure and the alien *Inca* overlay with which he was more familiar.

TRIBAL DIVISIONS

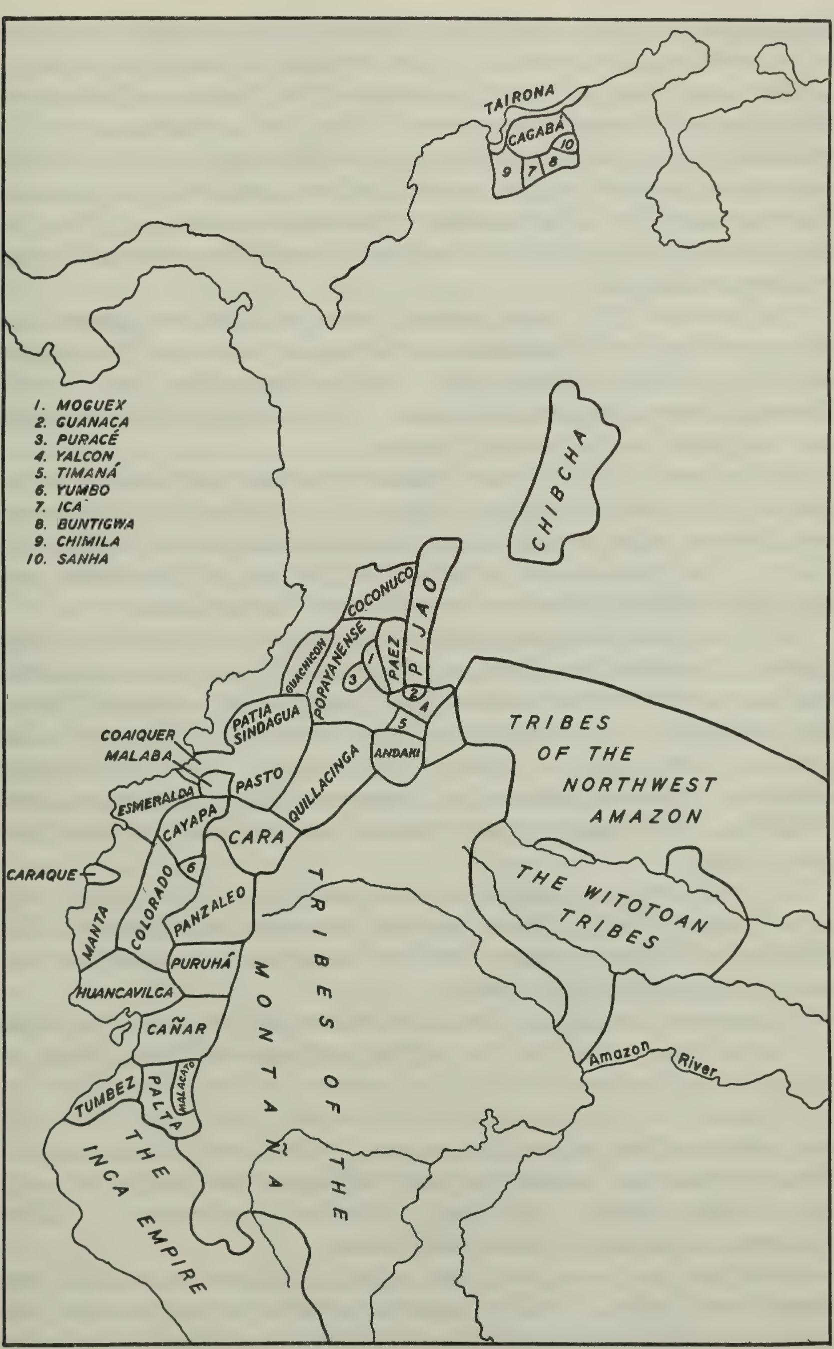
We know little about the *Esmeralda, Manta, Huancavilca,* and the *Puná* who lived on the coast (map 7). After sporadic mention by the very early chroniclers, these groups were either annihilated or rapidly incorporated into Hispanic society, and today the population of the Coast has lost its Indian character. The Coastal inhabitant of today, the montuvio of mixed Indian, Negro, and White descent, speaks Spanish, dresses like a poor White peasant, and overtly partakes of Ecuadorean (as opposed to Indian) culture.

Knowledge is also limited about the *Pasto,* the *Cara,* the *Panzaleo,* the *Puruhá,* the *Cañari,* and the *Palta* who, in that order from north to south, inhabited the territory of present-day Highland Ecuador. The tribal entities these names represent have been disorganized and are completely obliterated. Their different, mutually unintelligible languages are gone and lost; no written documents have been preserved, and the last speakers died in the 18th century. And still the Indian has not disappeared. Highland Ecuador is largely an Indian country. Over a million Ecuadoreans, almost half of the population, consider *Quechua* their native tongue.

The Ecuadorean Andes, divided into an Eastern and Western Cordillera, form a chain, with massive nudos, or "knots," repeatedly closing the links. The inclosed valleys have been heavily populated by a sedentary, agricultural population in both aboriginal and modern times. The climate is favorable to the cultivation of crops characteristic of both subtropical and temperate zones, because of the high altitude which offsets the low latitude. Numerous rivers water these basins and open deep gorges through the volcanic Andean walls. Some are affluents of the Amazon River, others flow to the Pacific. They open the Sierra or Highland area to contacts and influences from the western lowlands as well as from the Amazon.

Six linguistic groups occupied this area, but their territorial limits are not well known. As the tribal units long since disappeared, their identity and habitat must be reconstructed from the fragmentary information of chronicles, inadequately studied land grants, and the fairly well-known aboriginal toponymy. Sr. Jacinto Jijón y Caamaño (1940–41; also Paz y Miño, 1940–42) has provided the most recent study of tribal territorial limits, and, generally, we have followed his outline.

The *Pasto* were the northernmost group in the Highland. In aboriginal times they lived on both sides of the Colombian-Ecuadorean border, in the San Juan and Patía Valleys. They occupied most of


TAIRONA
CAGABÁ
10
9
7
8
1. MOGUEX
2. GUANACA
3. PURACÉ
4. YALCON
5. TIMANÁ
6. YUMBO
7. ICA
8. BUNTIGWA
9. CHIMILA
10. SANHA
CHIBCHA
COCONUCO
PIJAO
GUACHICON
POPAYANENSE
PAEZ
1
2
3
4
5
PATIA SINDAGUA
COAIQUER
MALABA
ANDAKI
PASTO
QUILLACINGA
ESMERALDA
CAYAPA
CARA
6
CARAQUE
COLORADO
MANTA
PANZALEO
PURUHÁ
HUANCAVILCA
CAÑAR
TUMBEZ
PALTA
MALACATO
TRIBES OF THE NORTHWEST AMAZON
THE WITOTOAN TRIBES
Amazon River
TRIBES OF THE MONTAÑA
THE INCA EMPIRE

MAP 7.—The Highland tribes of Colombia and Ecuador. (Drawn from data compiled by Gregorio Hernández de Alba, John Murra, Sergio Elías Ortíz, and Henri Lehmann.)

the present-day Province of Carchi as far as the Chota and Mira Rivers to the south and the summits of the Cordillera Oriental to the east.

The *Cara* (*Caranqui*, *Imbaya*) occupied the Province of Imbabura, extending east beyond Pimapiro, and also the northern part of Pichincha Province, having crossed the Guaillabamba River, and including such settlements as Carapungo (Calderon) and maybe Pomasqui, Tumbaco, and Pifo. To the west, the borderline is unclear. Their affiliation to the *Cayapa-Colorado* is quite close and their onetime identity has been postulated.

The *Panzaleo* (*Kito*, *Quito*) probably occupied the site of present-day Quito, and most of Pichincha as well as Cotopaxi and Tungurahua Provinces. Their southern limit was the Sanancajas "knot," with Mocha their southernmost settlement. The Cordillera de Sigchos has been suggested as the western frontier.

To the south, the *Puruhá* settlements were particularly dense around Riobamba and Guano, although use of the *Puruhá* language was reported as far south as the Nudo de Azuay and the Chanchan Valley. The *Puruhá* area includes the Province of Chimborazo and the part of Bolivar Province forming the Chimbo Basin.

The Chanchan Valley was apparently bilingual, as *Cañari* as well as *Puruhá* is reported for Alausi and Chunchi. The *Cañari* apparently lived in the western lowlands on the Coast, as well as in the Sierra. The Chanchan and, farther west, the Naranjal Valley were their northern limits, while the Jubones Valley marked their southernmost extension. The area includes the Provinces of Cañar, Azuay, and part of El Oro. Toponymy suggests that at one time they extended into Loja as well.

The *Palta* lived in present-day Loja and El Oro Provinces as well as in Jaén in Perú. Their western extension is unknown. The affiliations of this group are definitely Amazonian, and they are apparently latecomers in the Sierra.

The western lowlands of Ecuador are not the dry, desolate desert of Coastal Perú. But for the jutting peninsula of Santa Elena, in Manabí Province, most of the Coast misses the desiccating effects of the Humboldt Current and is true equatorial jungle, inhabitable only along river valleys and on the western declivities of the mountains. The environment of the area is totally different from that of the cold, high Andean Plateau, and most of life and its patterning differs fundamentally from Highland to lowland.

Aboriginal groups on the Coast varied in cultural complexity and linguistic affiliation. Their boundaries are even more uncertain than those of the Highland Indians, as the occasional travelers indicated overlapping abodes for what seem to be distinct ethnic units. There was much movement back and forth on the Coast, peaceful trade, and occasional forays and pillaging, so that contradictory statements written at different times are not astonishing. Only archeology can unravel this problem with any certainty.

The *Pasto* were the northermost group in the Highlands and in the San Juan and Patía Valleys. Known as *Colima*, *Barbacoa*, and *Coaiquer* on the Coast, they are clearly differentiated from other Coastal groups. The last is discussed on pages 921, 967, this volume.

The northern Coast, from Bahía de San Mateo (the mouth of the Esmeraldas River) to the Peninsula of Cojimies, was inhabited by the *Esmeralda*, who were closely related to the *Caraque* living below Cabo Pasado at the mouth of the Río de Chone.

The southern half of Manabí Province from Bahía de Caraquez to Salango belonged to the *Manta*. Apparently, additional *Manta* colonies (*Tacame*, *Beliquiama*) had been established in *Esmeralda* country as far north as the Santiago River.

The *Huancavilca* occupied Santa Elena Peninsula as well as the lower reaches of the Daule, Vinces, and Guayas Rivers.

The Island of Puná harbored the *Puná* Indians, who, according to some evidence, also controlled Tenguel on the mainland.

Most of the northern coast of El Oro as well as the area below the Naranjal River was in the hands of the Highland *Cañari*.

The *Tumbez* (*Tumpí*) extended from the *Cañari* south to the mouth of the Chira River in Perú, but they are included here because, historically, they clearly participated in the aboriginal life of the Gulf of Guayaquil.

The boundaries of inland groups are even more tentative. Some lived near the Coast in close proximity to the groups discussed above. Other inhabited the forests on the western slopes of the Andes, and their cultural orientation was toward the Highlands group.

Thus the *Malaba* lived on the upper reaches of the Mataje River; the *Yumbo* south of the Sierra de Lita in western Pichincha Province; the *Nigua* (*Cayapa*) on the upper reaches of the Santiago, Cayapas, and Guaillabamba Rivers, while the *Campaz* (*Chono*, *Colorado*) lived on the banks of the upper Daule River.

SOURCES

The most important single informant on the peoples of pre-*Inca* Ecuador is Pedro de Cieza de León (1932), who visited the country within 10 years of its conquest by Sebastian de Benalcázar, one of Francisco Pizarro's lieutenants. Much of the aboriginal culture was still alive and functioning, though disturbed by the *Inca*, by years of civil war, and by long-drawn-out defense against the Spanish invaders. Cieza was well aware that the peoples of this area were distinct from the *Inca* conquerors, and, although on occasion he mistook newly introduced house types and forms of worship for the aboriginal ones, his information on the whole is trustworthy, interesting, and certainly the best available for this early period. In his "Parte Primera de la Crónica del Perú" he lists names of the settlements occupied by each group and presents a summary of its culture. His sensitivity to cultural variation within a fairly small area places him in the forefront of Conquest chroniclers. The detailed treatment of the various groups given below relies heavily on his data.

An additional source of considerable value is the "Relaciones geográficas de Indias" (1881–97), a compilation of archival materials containing data gathered about 1580 by direct orders of the Spanish Crown. Local authorities throughout the Indies received lengthy questionnaires, some with 200 questions. Frequently, several witnesses discussed matters dealing with geographic location, climate, natural resources, native peoples, local government, taxation, religious indoctrination, and so on. Although these questions were answered more than 40 years after the Conquest when much of native life was already seriously disturbed, they are of considerable value for students of aboriginal life, particularly those interested in acculturation. The third volume in the series is devoted to Ecuador, and heavily emphasizes Highland data.

A similarly useful source is the early documents of the various cabildos or municipal councils, which are being published for the first time in recent years (Rumazo González, 1934 a, 1934 b; Garcés, J. A., 1934–37, 1937 a, 1937 b, 1938). In addition to much information on early Colonial life, they contain rules governing White-Indian relations, land tenure, and native self government.

A source which deals in detail with the pre-*Inca* history of the *Cara* people, "Historia del Reino de Quito," by the Jesuit Juan de Velasco (1841–44), has in recent decades been heavily attacked. The evidence seems to show that it contains data of a legendary, mythological nature that were prevalent in the 18th century about alleged events dating many centuries back. It should be utilized only with the greatest caution.

Some of the conquistadors who accompanied Ruíz and Pizarro on their first and second trips to Perú have left descriptions of life in the Coastal area. They were explorers in a new land, and the new people interested them keenly. This interest waned later with the discovery of *Inca* magnificence, but Samanos (1884), Jerez (1918), and Oviedo (1851–55) remembered enough to give us interesting and reasonably trustworthy accounts.

Jijón y Caamaño has recently printed (1941) excerpts of an unpublished manuscript by Miguel Cabello Balboa dealing with the natives of Esmeraldas Province, through which Cabello took several trips some 30 years after the Conquest.

Many of the 16th- and 17th-century chroniclers who wrote histories of the *Inca* Empire dealt in greater or lesser detail with the conquest of Ecuador by *Inca* legions in the 15th century. Miguel Cabello Balboa (1920) and Sarmiento de Gamboa (1906) give most details, but even they emphasize individual performance and adventure and are not rich in ethnologic information.

Several modern writers have tried to bring together data relating to Ecuador scattered among the various chroniclers. Federico González Suárez, Archbishop of Quito, was the first to prepare a summary of pre-Conquest life in the Ecuadorean Sierra (González Suárez, 1890–1903, vol. 1). Published at the end of the last century, many of the data are now obsolete, particularly the ethnologic correlations of local groups with larger South American linguistic families, only barely known in the 1880's. Gonzalez' pioneer merit, however, cannot be underestimated, as he digested a large number of original sources, many of them unpublished at the time.

In 1912, Verneau and Rivet published their summary of the ancient ethnography of the area, supplemented by a wealth of archeological data (1912–22). In recent years, Jacinto Jijón y Caamaño, the foremost Ecuadorean student of the nation's Indian past, has again assembled available data, including a critical discussion of source materials (1940–41). His emphasis lies heavily on toponymy and patronymics in an attempt to determine outside affiliations of the aboriginal languages as well as tribal limits.

Works dealing generally with Andean history have been listed and critically discussed by P. A. Means (1928) and Louis Baudin (1928).

ABORIGINAL CULTURES AT THE TIME OF THE CONQUEST

THE HIGHLANDS

In pre-Conquest times the peoples of Highland Ecuador, diverse in linguistic affiliation and type of previous environmental adjustment, shared a basic Andean cultural substratum. They lived high in the Sierra, in the fertile valleys between the two Cordilleras, avoiding the barren, excessively high páramos, or plateaus. The adjustment proved satisfactory and apparently resulted in considerable increase in numbers, well-being, and complexity of organization over their jungle-dwelling neighbors to the east. In fact, by 1400 A. D. the latter were moving up onto the Sierra, displacing some of the earlier settlers. The Spanish conquerors followed the pattern, and, even today, the Highland is the only part of Ecuador that is densely populated.

The Indians of Ecuador were a sedentary, agricultural people. They cultivated maize, quinoa (*Chenopodium quinoa*) beans, and many varieties of potatoes and squashes. Ají (*Capsicum annum*), a native pepper, was very widely used as a condiment. In the lower, warmer valleys fruits of all kinds, such as avocados, pineapples, chirimoyas

(*Annona cherimolia*), capuli (*Physalis peruviana*), and many others, were cultivated. Maguey, known here as cabuya, was widely grown for its fiber. Dogs and guinea pigs were the only domestic animals. González Suárez suggests that the llama was introduced by the *Inca*, and this is probably correct insofar as extensive use is concerned. Nevertheless, archeological evidence points to pre-*Inca* presence of llamas in both Imbabura and Cañar.

We have very little detailed information on the social organization of pre-*Inca* days. People lived dispersed over the mountainsides but frequently came together for ceremonial and other purposes. Local chieftains, later known by the *Inca* word curaca, collaborated with fellow chiefs in confederations or were subjected to "kings." The authority of such chiefs was considerable: They were able to raise armies and act jointly, even transcending linguistic lines. Rewards in rich jewelry, many wives, and ornate burials were available to these leaders from their grateful and obedient followers. Such collaboration and imposition of authority combined with a high degree of technological skill are typical of the northern Andes.

The *Pasto*, though a tribe of Ecuador, are treated elsewhere (this volume, p. 927).

THE CARA

Tribal divisions.—The *Cara* (*Caranqui*, *Imbaya*) lived in Imbabura and northern Pichincha Provinces. Some of their settlements were: Otavalo, Cochasqui, Quilca, Caguasqui, Cayambe, Caranqui, Urcuqui, Chapi, Pimampiro, Poritaco, Cotacachi, Tontaqui, Tumbabiro, Collaguazo, Las Huacas, Guaillabamba, and Carapungo (Calderon).

In addition, Jijón suggests that archeological evidence extends their southern limit to include Quinche, Pifo, Yaruqui, Tumbaco, and Pomasqui.

Language.—Although the *Cara* language is lost, its affiliation with the *Barbacoa* group of the *Chibchan* family has been determined on the basis of place names and patronymics. It apparently is quite similar to the language of the *Pasto* and of the *Cayapa* who live today in the western jungle.

Mythical history.—For a long time, the history of the *Cara* has been the subject of an acrimonious controversy. In the 18th century a Jesuit priest, Juan de Velasco, wrote a book purporting to be a history of the *Cara* and their greatness. It was based on 16th-century documents (now lost) and native tradition as transmitted to one of Velasco's contemporaries, a native chief.

According to Velasco, the *Cara* came from some place beyond the sea and disembarked at the Pacific port of Bahía de Caraquez. They were led by a chief called Schyri in their tongue. After battling some giants, they followed the Esmeraldas River into the Highlands, where they found the *Quito*, a weak, insignificant, and poorly organized nation. They conquered the *Quito*, and northern Ecuador fell to the invaders. At the borders of Chimborazo Province, the Schyri met the strong *Puruhá* "Kingdom." Unable to conquer through weight of arms, the Schyri used diplomacy and soon married his daughter, Toa, to Duchicela, the *Puruhá* Crown Prince. A strong kingdom was thereby formed extending from the Mira to the Chanchan River. Eventually, the *Inca* defeated and broke this organization, the last Schyri, Cacha, being killed at Atuntaqui. His daughter, Paccha, was wed to Huayna Capac, the conqueror. Atahuallpa, the last *Inca* Emperor, was her son.

Velasco also gives long lists of alleged aboriginal tribes and settlements as well as details of life and its organization under Schyri rule. He gives no details of subsistence activities, but states that land was held individually and could be inherited. The people wore clothes of wool, cotton, and hide, and were skilled craftsmen. They were a bellicose people, wielding axes, spears, and clubs against their enemies. Every warrior wore a feather crown, and, in addition, the Schyri wore a large emerald on his forehead. Commoners were monogamous, but the King could add an indefinite number of concubines to a chief wife. The crown descended in the male line, women being excluded. The sister's son inherited the throne in absence of a direct heir. The Sun and the Moon were worshiped, stone temples being erected in their honor. Mounds were built for burial purposes.

Although doubt had been cast on the veracity of Velasco's account as early as 1880 by Jiménez de la Espada, the story had considerable acceptance in learned circles insofar as its two important historical points are concerned: that the *Cara* came to the Highlands from the west after a sea journey and that they had organized a functioning kingdom or confederation which included the peoples of northern and central Ecuador. About the time of the first World War, Jijón y Caamaño reopened the matter by asserting that the whole story was a hoax, an uncritical compilation of oral traditions and legends prevalent in the 18th century. Jijón's statement started a bitter debate which has been raging ever since. It would seem that Jijón's point has been fairly well proved by the fact that none of the 16th- and 17th-century chroniclers who wrote of Ecuadorean tribes and their conquest by the *Inca* ever mention the Schyri or any such vast kingdom or federation. Archeologically, there is also no evidence that a late, pre-*Inca*, overall culture blanketed the Highland area, as would have occurred had the *Cara* actually conquered the rest of the country. A detailed discussion of this controversy can be found in Jijón's synthesis (1941, pp. 55–90).

Subsistence.—Like their other Highland neighbors, the *Cara* were farmers, cultivating maize, beans, potatoes, sweet potatoes, altramuces (*Lupinus* sp.), various grasses, and capulies, a cherrylike fruit. They kept guinea pigs, and hunted deer, rabbits, and birds. Spears and spear throwers were used in hunting.

Houses and villages.—Some of the settlements were quite large and densely populated, particularly Otavalo, Cayambe, and Caranqui. The houses were straw-thatched with walls of wooden posts and branches coated with mud inside and out. Chief's houses were larger and had a central post. Archeological work in this area by Jijón revealed domiciliary mounds, with fairly large structures built on top.

Clothing.—Men wore a large cotton blanket which they wrapped around themselves twice. Women wore a cotton cloth held at the shoulders with copper and silver pins. Around the waist they wore a multicolored belt, and over their shoulders they threw a small blanket, caught in front by another pin, a tupu. This form of dress was probably influenced by *Inca* wear, as it is quite similar in form and nomenclature to clothes elsewhere in the Empire.

Social and political features.—Chiefs enjoyed considerable prestige. The curaca was, ideally, the strongest and bravest man, but there is some indication that in practice the office was inherited along "direct," presumably patrilinear, lines. The land belonged to anyone who cultivated it, and could be transmitted to his heirs. The chiefs administered some communal lands, the products of which took care of communal expenses. There is a strong possibility, however, that this form of land tenure was greatly influenced by post-Conquest ideas on the subject.

Trade relations were maintained with the peoples of the eastern lowlands, who brought achiote (a red coloring powder), parrots, monkeys, and even children to exchange for blankets, salt, and dogs. Cotton was also imported from the east.

Religion.—Throughout the Sierra, the surrounding high volcanic mountains, their summits covered with eternal snow and almost always lost in the clouds, were part of the sacred life of the Indians. People usually thought themselves to be descended from some of the more obvious landmarks, which were personalized and imbued with gadabout qualities. The higher reaches were also places of retirement and worship for shamans and hechiceros, or witches, as they were called by the pious chroniclers. "Idols" of wood and stone are recorded for Pimapiro, on the eastern frontier.

Elaborate ritual followed death. The deceased was much mourned and wept over by family and neighbors, who brought gifts of food and chicha. His body was taken to the burial grounds along a road where straw and grasses of all kinds were burning to scare off his soul. This road could not be used by the mourning party on their return. Back home, they made an opening in the rear of the house, took out all their belongings, and dismantled the remaining framework.

Snakes played an important role in *Cara* mythology. One was believed to have very large eyes and a "tonsure"; another was as thin as a thread and so long that it took all day passing you. The sight of it was a bad and even fatal omen. In post-Conquest days, a priest reported that 20 persons in one community died from seeing this snake. The only way to prevent death was to retreat to the hills and purify one's self through fasting for 7 or 8 days, eating only salt and coca, foods with ritual value. The man's relatives went up to get him at the end of the week, readmitting him into the community.

THE PANZALEO

Tribal Divisions.—The *Panzaleo* (*Kito*, *Quito*) lived in Pichincha, Cotopaxi, and Tungurahua Provinces. The *Sigcho* were a subgroup living at the western periphery of the territory. The *Latacunga* are frequently mentioned as a local division. Some *Panzaleo* settlements mentioned by chroniclers were: Alangasi, Machachi, Pillaro, (La) Tacunga, Mulalillo, Patate, Baños, Sangolqui, Saquisli, Pelileo, Tizaleo, Anbato, and Mocha.

The *Panzaleo* were in close contact with the *Quijo*, to the east. The *Latacunga* chief is reported to have been related to a *Quijo* leader.

Language.—The *Panzaleo* language was apparently the first to die out in the Highlands. This is not strange, as in both *Inca* and Colonial times this area was the administrative center of alien invaders who preferred the "general" language, *Quechua*. On the basis of place names and patronymics, various deductions have been made as to the possible linguistic affiliation of *Panzaleo*. It seems quite different from its neighbors, and none of the suggested affiliations seems authoritative enough.

Subsistence activities.—The *Panzaleo* lived in fertile farming country, and grew the crops common to the area: maize, potatoes, beans, quinoa, ají, cabuya, and cotton. The women worked the fields, breaking the ground with a stick, which was notched in the middle to provide leverage. There was much game, and hunting was an important source of food. Land was privately owned; clearing and cultivating it insured title to it. We are told that land could be inherited and sold, though such sales are probably post-Columbian. Markets were held frequently, with commodities bartered in a friendly atmosphere.

Houses and villages.—The people lived spread out in the hills and valleys, the houses forming small settlements. Houses were built of mud-covered posts with thatched roofs, 40 to 50 feet (about 12 to 16 m.) long and up to 18 feet (6 m.) wide. In the cold, high country, houses were smaller and round with walls constructed of posts and thatch roofs which reached down to the ground, the whole man-size in height. It took only 2 or 3 days to erect such a house. These structures required less timber, and at high altitudes trees are very rare.

Dress and ornaments.—Men wore a sleeveless shirt, over which they threw a square blanket almost 2 feet (0.6 m.) long. Their hair grew long and was never cut. It was kept in place by a colored ribbon. Cutting the hair was a severe punishment, second only to death. The *Panzaleo* wore sandals of cabuya fiber. Women covered their bodies from neck to feet with a large shirtlike cloth, with only the arms showing. They wore a narrow blanket over the shoulders and kept it in place with a silver or gold tupu pin. They also used hair ribbons and sandals. Row upon row of gold and bone beads and silver bracelets were quite commonly worn.

Manufactures.—With women busy in agricultural pursuits, men spun, wove, and cut clothes, made weapons, and fought the wars. They used spears and clubs of fire-hardened palmwood, spear throwers and slings, with which they were very expert.

Chieftainship.—Chiefs had considerable authority and could be distinguished by their ornate dress. Their houses were much larger and, on ceremonial occasions, served as communal gathering places, the chief providing the food and the chicha. They owned much gold and other jewelry, such as pendants, nose plugs, and bracelets. A chief was expected to be the bravest and most hard working of all men. There was a hierarchy of native leaders who were kept in touch with the headman by means of runners. These features may have been of *Inca* origin.

A chief was buried with much ceremony and mourning. He was interred seated on a stool, with his favorite wife at his side. All his ornaments and large quantities of chicha were placed in the tomb. Ordinary folk were also buried in a sitting position, with a thick piece of cane in their mouth, and were liberally provided with corn beer.

Religion.—The Spaniards report that shamans represented the people in dealing with Supay (Torres de Mendoza, 1868), now a generalized native Ecuadorean evil deity. Offerings were made to placate his wrath.

Mythology.—Native mythology derived the *Panzaleo* from the bottom of Tungurahua, a local volcano. A great celebration lasting 4 to 6 days took place once a year, a hundred or more people participating. The origin myth was recited amid much singing, dancing. and drinking.

THE PURUHÁ

Tribal divisions.—The *Puruhá* inhabited Chimborazo and Bolivar Provinces, south of the *Panzaleo*. They were moving up north in late pre-*Inca* times, according to archeological evidence. Their area was densely populated with many villages, which Cieza unfortunately does not list "to avoid prolixity." The anonymous author of a description of several villages in this area (Torres de Mendoza, 1868) mentions as *Puruhá* towns: Calpi, San Andrés, Guano, Ilapo, Guanando, Penipe, Quimia, Achambo, El Molino, Pungala, Lito (Licto), Puni (Punin), and Yaruquies. In addition, Chimbo, Alausi, and Chunchi are known to have been inhabitated by the same people.

Language.—The *Puruhá* language is now lost, although it was still spoken as late as 1692. Place names and patronymics, however, have been used in attempts to determine its affiliation, and several investigators have suggested its relationship to *Cañari*, a language spoken by a large group farther south. Jijón suggests that both *Puruhá* and *Cañari* are part of a large linguistic family which includes *Chimu* (Mochica) on the North Coast of Perú as well as *Huancavilca* and *Manta* on the Ecuadorean Coast. He suggests the name *Puruhá*-Mochica for languages spoken from Chimborazo in Ecuador to Huancayo in Perú. A chronicler describing settlements in the Chanchan Valley, however, lists *Puruhá* and *Cañari* as distinct and presumably mutually unintelligible languages. On the whole, the various suggested affiliations seem tenuous, particularly as we know virtually nothing of either *Puruhá* or *Cañari*.

Subsistence activities.—Although much of the land in Chimborazo is too high for agriculture, the province includes some of the most densely populated areas in Ecuador. Intensive agriculture has been practiced for a long time, the people raising maize, beans, squash, potatoes, quinoa, and a lot of cabuya for its fibers. Deer, rabbits, and several species of birds were hunted. Data on land tenure date from the end of the 16th century, 50 years after the Conquest, and therefore do not reliably represent aboriginal conditions. At that time, land was held individually, only a small area being owned by the community and cultivated by it for the benefit of the "absent"—the people who were serving out their tribute away from home.

Houses and villages.—Cieza reports stone houses for the area, but this is also probably a post-*Inca* development. Dwellings with walls formed of mud-covered posts and thatched roofs were commonly used. In most of the area people lived spread out over the mountainside, although 10 to 12 families were reported living together at Alausi.

Dress and ornaments.—Men wore sleeveless shirts which came down below their knees, and blankets of cotton and wool. Their hair was worn very long, piled up in a circle on the head and tied with a cabuya string, which was also used as a sling and identified the wearer as a *Puruhá*. As elsewhere in the Sierra, the cutting of one's hair was viewed with alarm and took place only on special, ceremonial occasions.

Manufactures.—The *Puruhá* were known for their skill in weaving cotton and cabuya fiber. Spears, clubs, and slings were used in hunting and warfare. Trade relations were maintained with the Coast, cabuya fiber being exchanged for salt.

Political organization.—All the chroniclers mention the cohesive organization of the *Puruhá*. Most of the area was under the leadership of one "king," who controlled the local chieftains.

Life Cycle.—We have more data than usual on the *Puruhá* life cycle. A child was named when 5 or 6 years old, and taken by its parents from house to house. People cut off a lock of the child's hair, after which they owed it a present.

Chiefs could take several wives, but common people were monogamous. When a young man wanted to marry, he took wood, straw, and chicha to the girl's house and promised to take care of her always. If her parents agreed to the union, they gave her to him. The bride's hair was cut at marriage, and again at the birth of her first child. She dared not mention the "family" name of her husband.

At death, chiefs were buried sitting on a stool, the symbol of their office. The body was removed from the house through a hole hacked in the rear wall, after which the house was abandoned. There was much drinking and dancing around the body, which was lowered into the grave along with food, chicha, and clothes. When a man died, his wife wept a long time and wandered through the woods calling him. Upon returning to her house, she cut her hair and blackened her face with pitch. Some days later, she terminated mourning by washing in the river to forget her sins and her husband.

Religion.—The *Puruhá* believed they were descended from the union of two local volcanoes, Chimborazo, the male, and Tungurahua, the female. This union was considered permanent, continuing from before the original creation of man up to the present. Human sacrifices were made to Chimborazo as well as to a clay figure at Liribamba.

Lightning and rainbows were bad omens, as well as intrinsically pernicious. A house struck by lightning was abandoned, although many of the household furnishings were still serviceable. Only shamans could claim these belongings as their own. After lightning struck, a person abstained from salt and ají for a long time. A rainbow shining into a house could kill the people inside; everybody ran out to avoid this. The rainbow could also impregnate careless women.

At maize harvest time, the *Puruhá* gave a big feast. A warlike young Indian was sent fully armed into the neighboring hills and loudly challenged all comers to fight him. Having met no opposition from evil spirits or other enemies, he returned victorious to the feast. A potato field in flower could not be approached without flagellating one's feet with nettles, to prevent the plants from withering away.

THE CAÑARI

Habitat.—The *Cañari* were the principal native group in southern Ecuador, occupying an extensive area in the Highlands and the western lowlands. The towns of Chunchi and Alausi were contact points between the *Puruhá* and *Cañari*, both languages being spoken in these towns. In 1450, the Jubones River formed the southern limit, though chroniclers and toponymy indicate that the *Cañari* had peopled most of Loja Province at an earlier date.

Language.—Jijón has suggested that the *Cañari* language was closely related to *Puruhá*, a language spoken to the north, in Chimborazo Province, and that both were part of a larger *Puruhá-Mochica* linguistic family, which included several languages on the Coast of Ecuador and Perú, such as *Huancavilca*, *Manta*, and *Chimu* (*Mochica*).

Subsistence activities.—The *Cañari* were an agricultural people raising potatoes, maize, beans, quinoa, and gourds. The women did most of the work, preparing the fields, sowing and reaping, while the men were engaged in weaving, making clothes, and preparing for war. Irrigation was prevalent, and many areas which today lie fallow were cultivated. Although the llama is generally considered an *Inca* importation, archeological evidence shows that it was known to the aborigines of Cerro Narrío, Cañar, in late pre-*Inca* days. Deer, rabbits, and various birds were hunted, and llama meat was preserved as charqui, or jerked meat, perhaps a trait of southern origin. One report mentions fishing as an important occupation at Paccha, near Cuenca.

Houses.—Chiefs had large, rectangular houses with a patio in front where they addressed their followers. Cieza reports stone houses with straw-thatched roofs, but it is improbable that such construction is pre-*Inca*. The common people lived in round or oval structures with walls formed of posts. These took 2 days to erect with the help of fellow villagers, and lasted 6 to 8 years.

Clothing.—Men wore a shirt and a blanket which left their arms and legs bare, while women wrapped a cloth around their bodies and a short blanket over their shoulders. Both sexes wore sandals. Their long hair was braided and piled on the head in a knotted crown, and decorated with a wooden or gourd-rind circle, and, occasionally, with ribbons. This circle was peculiar to the *Cañari* and identified them when away from home. Chiefs wore many ornaments of gold, silver, and shell.

Manufactures: *Metallurgy.*—The *Cañari* were great craftsmen in various metals, particularly in gold and gilded copper. Gold crowns with multicolored feathers, masks, beads, toys, and many other intricate objects are found in graves in this area. Scores of pounds of worked gold objects were taken from graves during the 19th century, but most of them were melted down and lost. Those which escaped destruction compare favorably with the better-known goldwork of the *Chibcha*, in Colombia (Saville, 1924 b; Heuzey, 1870), and amazed the goldsmiths of 16th-century Europe, both for their technical and artistic qualities.

Ceramics.—Ceramics found in this area are technically and artistically among the best made in the Ecuadorean Highland. In later Colonial times, *Cañari* pottery was traded all over the southern part of the country. The chronicler Fr. Gaspar de Gallegos attributes such excellence in pottery and metalwork to *Inca* influence. Archeological evidence contradicts such an assertion: all over Cañar and Azuay, pre-*Inca* strata yield artifacts indicating considerable skill and esthetic appreciation.

Weapons.—In war and hunting, palmwood spears and spear throwers were used along with slings and clubs. Copper and stone axes were known, and rumor has it that a ton and a half of copper axes were extracted from one large collective burial.

Social features.—Chiefs were polygamous, their followers usually monogamous. The eldest son of the main wife inherited his father's rank and wealth. There was a definite hierarchy of native chieftains, with the one at Tomebamba considered most important.

The *Cañari* confederation was well aware of its neighbors and maintained close relations with them. Intermarriage and cooperation with a Macas chief are reported when resistance against the *Inca* was being organized. The *Jívaro*, inhabiting the jungles to the east, were once part of a *Cañari* confederation, although most reports consider them enemies, which is likely, as the *Jívaro* known as *Palta* occupied Loja Province, which had formerly been *Cañari* territory. Frequently, these groups fought over women. When at war, the *Cañari* painted their faces, arms, and legs red, and hung parrot feathers and silver pendants on their chests. Friendly relations with various neighbors were maintained and bolstered through active trade, which exchanged the tropical products of the eastern and western lowlands for those of the inter-Andean plateau. Cotton and salt were chief exchange commodities. Salt springs were a frequent cause of dispute.

Burials.—Collective interment of the dead was not unusual. Chiefs were buried in deep, circular holes, their bodies flexed in a sitting position. Male dominance was such that wives and servants were dispatched to assist the leader in the other world. Weapons and ornaments of all kinds were included, along with land snails which are found in the poorest of the graves. Large boulders were piled up at the mouth of the grave.

Mythology and religion.—Tradition derives the *Cañari* from the union of a male survivor of the Flood with a woman-faced parrot. The Flood may well be a Christian element, but the parrot is undoubtedly a native pre-*Inca* sacred animal of totemic nature, being a common *Cañari* art motif. Another myth designates a lagoon near Sigsig as the place from which the ancestors emerged. Garcilaso de la Vega reports that the *Cañari* worshiped the Moon, certain large trees, and marbled stones. Bears are also mentioned among deities. At Paute, a young boy with light hair appeared occasionally in pre-*Inca* days to chiefs and elders.

THE PALTA

Habitat.—The *Palta* and *Malacato* lived in the Province of Loja, north to Piedras in El Oro and south to Xoroca in Jaén. Saraguro was an important *Palta* center, and Capolanga, Yunchique, Turocapi, and Gonzaval are mentioned by chroniclers as settlements in Jaén. The *Malacato* were a *Palta* subdivision, living on the eastern slope of the Cordillera Oriental, toward Zamora River. These tribes were largely ignored by the chroniclers.

Language.—The *Palta* language was intelligible to the *Jívaro,* who lived in the jungles to the east. Rivet suggested an *Arawakan* affiliation of the language.

The *Palta* were newcomers to the Highland, for Jijón found almost a fourth of the local patronymics to be of northern, non-*Palta* origin. In addition, several of the early writers remark that *Cañari* was understood throughout the area.

Subsistence.—After arriving in the mountains, the *Palta* adopted Highland crops, and grew maize, potatoes, beans, and squash, as well as avocados, pineapples, and other tropical fruits. There was little game; hunting and fishing were much less important than in the jungle.

Houses and villages.—*Palta* settlements were spread all over the hillsides, the cultivated land of each family surrounding its house. The village territory was delimited; the limits were generally known and observed. As elsewhere in the Andes, houses had walls of mud-covered posts and a straw thatched roof.

Clothing and ornaments.—Men wore a sleeveless, knee-length cotton shirt with a capelike blanket over it. Both sexes wore sandals of cabuya fiber or sometimes hide soles, tied to the foot with multi-colored thongs.

The *Palta* practiced fronto-occipital head deformation.

Manufactures.—The chroniclers agree that although the *Palta* were more peaceful than their neighbors, the *Cañari,* they were neither as civilized nor as skillful at various tasks. Archeology has not yet determined the material culture of this area, and we lack concrete information about the manufactures. The principal weapons were slings, spear throwers, and clubs.

Sociopolitical features.—Sociopolitical and religious organization reported for this area have a strong Cuzco flair, probably because the *Palta* submitted readily to the *Inca* conquest and acculturation. The only hint of an earlier, different social organization comes in the chroniclers' report of bewildering diversity in inheritance rules: in some places, the son inherited; in others, a sororal nephew; and elsewhere, a brother.

THE WESTERN LOWLANDS

The area west of the Cordillera may be divided into the Coast and the forested, hilly jungle area from which the Andean Chain rises suddenly. People cultivated maize, aji, cotton, guabas, avocados, and other fruits in clearings along river valleys or in the fertile zones along the ocean. Bananas were introduced early in the post-Contact Period.

The Coast was inhabited by rather advanced groups that were closely related culturally. They were in contact with each other through the regular flow of coastwise trade. Though they knew and traded with the inland peoples, they were quite distinct from them. The affiliations of the latter were predominantly with the Highland, where their contacts were intimate. Both Coastal and inland types can be clearly distinguished from the naked *Barbacoa* or *Coaiquer*, who lived in what today is the southernmost coast of Colombia.

THE ESMERALDA

Habitat.—The *Esmeralda* received their name from the emeralds which the Spaniards found in their territory. Their aboriginal name is uncertain. They inhabited the lower course of the Esmeraldas and perhaps the Verde Rivers, and the hilly country between Cojimies and Atacames. Seler, Rivet, and Jijón have identified the *Caraque* living in the Briseño and Chone Valleys to the south with the *Esmeralda*. The *Caraque* should not be confused with the *Cara*, who lived in the Highland Province of Imbabura. In legends, the *Cara* derive themselves from the lowlands. Both groups spoke *Chibchan* languages, but at the Conquest they were distinct ethnically, and archeology has not yet confirmed their possible earlier identity.

It is probable that at an earlier period the *Esmeralda* occupied a much larger territory along the Coast, but at the Conquest they were being displaced by *Manta* colonies, and their older settlements looked like alien enclaves on an otherwise homogenous Coast.

Language.—The *Esmeralda* language was the only Coastal idiom still spoken in the 19th century, when a large vocabulary of it was collected. It is extinct today. Seler has suggested a connection of *Esmeralda* with *Yarura*, which was spoken on the Meta River, an affluent of the Orinoco in northeastern Colombia (Handbook of South American Indians, Volume 4.) The evidence for this is not conclusive, and later investigators have preferred to give it generalized *Chibchan* affiliation.

Culture.—The *Esmeralda* lived in Coastal villages which were quite independent from each other and frequently at war. Garcilaso claims that the *Esmeralda* raised no crops and depended only on fishing and root gathering. Undoubtedly, fishing was important; fish were consumed locally and were traded, along with salt, to the peoples of the interior. But other evidence paints them as a folk rich in jewelry of gold and silver with set-in emeralds, skilled weavers of cotton cloth, inspired molders of elaborate ceramics, and agile maneuverers of dugout canoes. Nevertheless, the *Esmeralda* were probably noticeably poorer than their commercially minded Coastal neighbors to the south. They were easily distinguished from the *Manta* as they did not tattoo their faces and did not wear a colodrillo (a crown of colored cotton, sometimes interwoven with gold and silver thread), both common to the south. The *Esmeralda* deformed their heads fronto-occipitally, believing it gave them health and endurance. Like other Coast groups, they wore earrings, labrets, and nose plugs of gold and silver. We have no data on their social, political, and religious organization.

THE MANTA

Habitat and divisions.—The name *Manta* was given by Rivet and Verneau to the trading peoples along most of Ecuador's Coast. The chroniclers had no generic name for these Indians, Cieza calling them "those with tattooed faces" and the "Indians of Porto Viejo." Jijón prefers to call them Liga de Mercaderos, the League of the Traders, which is probably the best name, as Manta was merely one of many settlements inhabited and controlled by these people.

Some *Manta* settlements, mentioned by Cieza, were: Passaos (Papagayos?), Jaramijo, Pimpaguace, Peclansemeque, Jagua Valley, Pechonse, Monte Cristi, Apechingue, Silos, Canilloha (Canilope), Manta, Sapil, Manabí, and Jaraguazo.

Pizarro's seagoing scout, Bartolomé Ruíz, left another list of trading settlements which, in addition to several towns listed above, includes: Calonge, Tusco, Saracapaz, Salango, San Mateo, Atacames, Nancabez, Tovirsimi, Toloma, Quisimios (Cojimies), Coaque, Arampajaos, Pintagua, Tonconjes, Caraslobes, Canes, Amatospe (Apelope), and Doca. Ruíz's list extends the domain of the traders into *Esmeralda* country and incorporates the *Tacame*, who, according to Cabello Balboa, lived beyond the Cabo Pasado.

Language.—The anonymous author of a description of Guayaquil (Torres de Mendoza, 1868) and Oviedo state that all the maritime Indians spoke the same language. Other observers emphasize that there was considerable dialectical differentiation on the Coast but note that mutual comprehension was possible. The Quito Synod meeting in 1593 assigned several priests to study eight native languages, including one, to be used in the conversion of the Coast groups, which they called *Tallana*. Jijón has suggested that *Tallana* which, like other native Coast languages, is now extinct, belonged to his

Puruhá-Mochica linguistic family, which includes several groups in Ecuador and Perú, such as the *Puruhá, Cañari, Chimu*, and others.

Subsistence activities.—The *Manta* cultivated maize, yuca, potatoes, and other crops. According to Zarate, women did all the field work and the cooking. Presumably, men fished and traded, though their total abstention from agricultural pursuits is doubtful. Fish supplied a significant quantity of food and were apparently eaten raw with maize bread; hunting of deer and game birds was also important. Cieza mentions a domestic duck, the juga, and a few llamas, probably of *Inca* origin, were seen by other early travelers.

Houses.—The *Manta* lived in large villages. Their houses were built of cane or wood and were covered with thatch.

Dress and ornaments.—Men dressed in short cotton shirts and occasionally used blankets. The genitals were sometimes covered with a short cloth, but most chroniclers were impressed with the lack of any inguinal covering. The hair was shaved on top, reminding Zarate of a clerical tonsure. The shaved portion extended all the way from front to back, the hair being allowed to grow only on the sides. The hair was adorned with a crown of colored cotton thread, an ornament common to all Coast peoples. Gold, silver, and, occasionally, pearls were worked into this crown. Women wore long skirts or a blanket from the waist down. Both sexes wore gold and silver earrings and nose plugs, and many rows of red shell beads, called chaquira, which were highly prized everywhere along the Coast. Gold inlay of teeth and the ceremonial removal of men's teeth were general on the Coast.

The *Manta* did not deform their skulls, like their neighbors to the north, but were known as people who tattooed their faces from ear to chin. On frequent but unspecified occasions, they painted their whole bodies black.

Boats and trade.—All observers seem to agree that the maritime peoples of Manabí were great sailors, skillfully handling dugout canoes and elaborate balsa rafts on fishing, commercial, or ceremonial trips.

The large raft, equipped with sails and cabin, carrying some 20 people and 30 tons of merchandise, met by Bartolomé Ruíz gives an idea of the extent and magnitude of coastwise traffic undertaken by these people. Some investigators have thought that this raft was out of Tumbez or Puná. When captured, its Indian crew said they came from Calangane, which Rivet and Jijón locate in Manabí. Unfortunately, the northern destination of the raft has never been ascertained, but the event leaves no doubt as to the existence of organized commerce in the area. The voyage must have been partially ceremonial in purpose, for the main commodity on board was the red chaquira beads mentioned above. In addition, the cargo included many black pots (perhaps *Chimu*, though Jijón has found some black ware in late horizons in Manabí), wool cloth, embroidered shirts and blankets, and many ornaments of silver and gold. Emeralds, a characteristic Ecuadorean gem, were included. The people sponsoring the raft were efficient tradesmen, who knew how to assay metals and who used a steelyard to weigh their goods. Merchandise such as the wool cloth and the use of the steelyard indicate that the *Inca* were involved in these trading operations. There is no reason to doubt Jijón's suggestion that the headquarters of these traders can be located in Manabí, but it seems fairly obvious that the flourescence of such commerce must have received its impetus from the south.

Social features.—The only item on sociopolitical features is that primogeniture is reported, with the father's sister's son becoming the heir in the son's absence.

Burial.—The dead were mourned profusely. Living women, precious objects, and food were placed in the grave for the use of the dead man. Burial took place in a deep-shaft grave, and was accompanied by much dancing, music, and drinking. Even after his grave was closed, a tube of cane connected the deceased with the world of men. Chicha, the all-Andean maize beer, was poured down the cane to comfort the deceased.

Religion.—The chroniclers were much interested in *Manta* religious activities. Cieza lists the sun, moon, certain trees and stones, and the sea among the sacred objects. Emphasis was placed on sacrifices and offerings made to placate the gods, who were represented by statues and idols kept in temples. Some of these images were of snakes and sharks, and Oviedo reports two carved black male goats placed at both sides of a low altar where incense was burned. Sacred professionals mediated between the people and the deities and, as elsewhere in Ecuador, are reported to have "spoken with the devil." Animals and human beings were sacrificially killed. Prisoners of war had their heads chopped off and presented as an offering to the god, while their bodies were flayed and the skins filled with ashes or straw. Oviedo includes the tribe's own women and boys among sacrificial victims. All chroniclers speak of male homosexuality as prevalent among the Coastal peoples, and we get an inkling of its possible ceremonial significance from the *Manta* origin myth which postulates an early all-male and therefore inverted population for this area.

Offerings were also made to cure sickness, and people came from far and wide to the town of Manta, where the chief owned a large, sacred emerald which was transmitted in his family. When the jewel was exhibited on certain days, it was revered by all because of its curative powers. Cieza was a bit amazed when the natives in later years resisted pressure to disclose the whereabouts of the stone.

THE HUANCAVILCA

Habitat and divisions.—The *Huancavilca* inhabited most of the present-day Province of Guayas. Some of their settlements were: Yagual, Colonche, Chinduy, Chongon, Daule, Chonoma, Colonchillo, Guayaquil, Yaguachi, Racual, Guaya, Cachao, Veindal, Uchicacao, Chadai, Chandui, Tantomo, Mopenitos, Payo, Belin, and Guare. Both culturally and linguistically, this group was closely related to the *Manta* of the western Coast. Their language is extinct. Jijón classed it in the *Puruhá-Mochica* family.

Subsistence.—The *Huancavilca* cultivated maize, yuca (sweet manioc), and other crops characteristic of this area. Fish were an important item in the diet.

Dress and ornaments.—Men wore short cotton shirts and a loincloth. In their hair they wore crowns of very small gold and silver beads, and sometimes of jaguar skin. Women wore a cloth hanging from the waist and another over their shoulders. As elsewhere along the Coast, the teeth were ornamented with gold, and removal of three upper and three lower teeth is consistently mentioned.

Burial.—The dead were placed in a round vaulted grave, opening to the east. Living women and weapons were included in the burials of chiefs.

Religion.—To insure fertility, it is said that human blood was sacrificed in the fields. Cures were also effected through sacrifice. Cieza mentions that human hearts extracted from sacrificial victims were revered as gods. Old men were reported to have communicated with "devils."

THE PUNÁ

Habitat and divisions.—The *Puná* lived on the island of the same name. On the evidence of early Colonial land grants, Jijón has suggested that they also controlled some of the southern coast of Guayas, near Tenguel. Culturally and linguistically, the *Puná* belonged with the *Manta* and *Huancavilca.*

Subsistence.—The island was fertile, and abundant crops of corn supported a dense population. Fish and boiled maize were the staple foods.

Dress and ornaments.—The *Puná* wore cotton clothes similar to those on the mainland. Men wore a short shirt and a loincloth, and the women a long shirtlike cloth from neck to foot. Men cut their hair short. Both sexes wore red chaquira beads.

Political groups.—There were seven major settlements on the island, each with its own cacique and one paramount chief for the whole island. The chiefs are reported to have been polygamous and to have had eunuchs to guard their harems.

Trade and warfare.—The *Puná* had a great reputation as pirates and traders. They were apparently incorporated in the Coastal trading league. They engaged in constant wars with the settlements on the continent, particularly with Tumbez, a large town full of attractive booty and the last important *Inca* settlement on the North Coast. In fighting, they used spears and spear throwers, slings, copper axes, and clubs. War and commerce had so enriched the *Puná* that all chroniclers were impressed with their prosperity.

Religion.—Details on *Puná* religious beliefs are not on record. They venerated the sea, fish, and some large felines. Spanish gossip had it that temples with horrible sculptured designs were hidden in the bush, but these have not yet been found.

THE TUMBEZ

The *Tumbez* (*Tumpí*) lived on the southern coast of the Gulf of Guayaquil and south to the mouth of the Chira River. They were conquered relatively early by the *Inca*, so that by the time of the Spanish Conquest it was difficult to distinguish the aboriginal structure under the Peruvian overlay. According to *Inca* tradition, the *Tumbez* had been naked cannibals before their incorporation into the Empire, but this claim seems like a bit of mythology in the making. The *Tumbez* were probably related to their archenemies, the *Puná*. Oviedo described their clothes, which were of general Coastal type: short shirts and loincloths for men and long skirts for the women. Everybody wore many rows of red chaquira beads.

THE COLORADO AND CAYAPA

In addition to these Coastal tribes, the western lowlands harbored several native groups of "lesser understanding" who lived in the very wet country between the Coast and the mountains. They cultivated maize, ají, cotton, and guavas, which they frequently traded along with salt and fish to the peoples of the Highland. Two of these groups, the *Cayapa* (*Nigua*) and the *Colorado* (*Campaz*), are the only lowland aboriginal groups that have survived to the present day in their jungle retreat. They will be discussed in the Handbook, Volume 4.

THE MALABA

The *Malaba* lived in the 18th century in the valley of the Mataje River in northernmost Ecuador. In the 17th century, they had lived in Esmeraldas but had run away from Spanish domination. Their relationship to the *Esmeralda* is not known. According to their traditions, which were collected by Stevenson (1826), they were descended from a *Puruhá* (*Puncay*) group in the Highland. We have no information about their present whereabouts or condition.

THE YUMBO

The *Yumbo* were a *Panzaleo* group who lived on the western decline of the Andes (pl. 166, *bottom, right*). Their most important settlements were: Gualla, Llulluto, Nanical, Alambi, Camoqui, Cachillata, Zarapullo, Napa, Alaqui, Canzacoto, Topo, Mindo, and Nambe. Their territory coincided in some measure with that of the *Cayapa*, but the Cabello manuscript specifically distinguishes the two tribes. Cieza mentions them in his discussion of the *Panzaleo*.

The term *Yumbo* is today applied indiscriminately to all lowland Indians on both sides of the Cordillera, and has, therefore, no ethnic value.

THE INCA CONQUEST OF ECUADOR

In the second half of the 15th century, the *Inca* Empire extended its dominion into present-day Ecuador. Tupac Yupanqui, reigning at that time, began his campaign about 1455 and his son, Huayna Capac, completed the conquest some 40 years later, after Columbus had already landed at Hispaniola. Ecuador represented the northernmost extension of Cuzco power and its pinnacle. At the threshold of the 16th century, the Empire was a vast and intricate structure, the most elaborate social organization in the New World. (See this volume, pp. 201–209.)

There had been nothing comparable to the Empire in Ecuador. Native villages were federated through their leaders into cooperative tribal bodies which acted in self defense or on other special occasions. There were several such federations on this limited territory, but all were poor, weak structures compared with that of the *Inca* and lacked true state organization. Their defeat was only a matter of time, though their opposition to the *Inca* was frequently fierce and protracted.

The *Palta* were conquered first, and the job was apparently easy. At a later date, according to the chroniclers, they refused to join an anti-*Inca* plot engineered by the *Cañari*, who stiffly resisted and once even defeated Tupac Yupanqui, throwing him back to Saraguro. The *Cañari* formed a federation with non-*Cañari* groups and eventually made peace with the Empire on much better terms than the *Palta*. *Puruhá* and *Panzaleo* groups fought Tupac at the Chanchan River and again at Liribamba. Resistance was so fierce in *Cara* country that additional conquests were postponed. Although old animosities divided such *Cara* groups as the *Otavalo* and the *Caranqui*, they were able to unite, and for 17 years successfully opposed *Inca* penetration. Finally, Huayna Capac broke into Caranqui and, according to legend, many thousands were killed and thrown into Yaguar Cocha, the Blood Lake. The southern steamroller rolled on to Río Mira and beyond, and in many fundamental ways seriously affected native life.

On the Coast, the *Puná* and *Huancavilca* resisted the conquest for some time, but eventually were also incorporated in the Empire. Huayna Capac advanced to Esmeraldas, and some of his captains reached Rio Mira to the north, in Colombia. But there was not much here to attract the conqueror. The *Inca* regarded the tropical lowland dwellers as naked, uncivilized savages, who were hardly worth the bother of enforced civilization. The land was poor according to *Inca* standards, the climate unhealthy for Highlanders, the towns small, and the orejones, the Emperor's representatives, wished they were home. Tumbez was built up as a terminal fortress against the attacks of the *Puná*, colonists (mitimaes) from elsewhere brought in, and 200 weaving vestal virgins were settled near a large temple to the Sun. The Coastal road stopped here as it could not advance through the tropical wilderness. Beyond the Gulf of Guayaquil, the natives were in constant rebellion. On the Coast, the Empire ended at Tumbez.

Separation of *Inca* and native elements in the cultures of Ecuador as they are reported by the chroniclers is not easy. All observers visited the area not only after Huayna Capac but also after Sebastián de Benalcázar had annexed it to the Crown's possessions. The archeology of Ecuador has not yet received enough attention to enable us clearly to identify known material culture complexes with historic tribal units. Nevertheless, one can state that almost no aspect of aboriginal life in the Highland was left untouched.

A detailed discussion of life in the *Inca* Empire is presented in this volume (pp. 183–330). The Empire was a powerful state structure, controlling a large area and numerous populations of diverse ethnic backgrounds for the benefit of a ruling aristocracy—its highly centralized law enforced by a standing army, a large bureaucracy, and a munificent and temporally important clergy.

All land theoretically belonged to the Emperor and practically was held collectively in custody by the ayllu, which became increasingly an imperial administrative division. The system of obligations between the sovereign and his subjects was worked out with considerable efficiency. The subjects, self-sufficient groups, tilled their lands as well as those of the Church and the Emperor, served in the army, and manned the tambos, or way stations along the remarkable highways built by the *Inca* to connect their possessions. Performance of public work was compulsory, and whole populations could be shifted hundreds of miles to conform with imperial policy. The Emperor attended to his subjects' interests and provided food and clothing in case of disaster and famine.

The *Inca* had conquered many lands and many peoples before coming to Ecuador. The policy of dealing with conquered groups, which had been worked out elsewhere, was applied in this area. Whenever possible, the *Inca* Emperor preferred to rule through native leaders who were not molested if they were willing to recognize the Emperor's divine authority and pay tribute. Their sons were frequently taken to Cuzco for indoctrination in imperial goals and policies. Where serious opposition was met, as in the case of the *Cañari*, *Puruhá*, and *Cara*, native organization was smashed by removing a large part of the population and replacing it with mitimaes, settlers from other parts of the Empire who had been conquered long before and were now thoroughly acculturated and reliable. Thus, thousands of *Palta* were taken to Collao, near Lake Titicaca in Bolivia, and replaced with Bolivians. Other mitimaes had been settled in *Cañari* country at Cojitambo and Chuquipata, while many thousands of natives were distributed elsewhere in the Empire, including an imperial guard at Cuzco and a settlement farther north at Quinche, in the Province of Pichincha. According to Oviedo, all inhabitants of Chimborazo were now either *Quechua*- or *Aymara*-speaking Indians from Bolivia, the natives having been deported south. This is an exaggerated statement, as *Puruhá* was spoken locally as late as 1692, but there must have been many who were sent away. In *Puruhá* country, however, the Chimbo Valley had many settlements of Indians from Huamachuco and Cajamarca in northern Perú. Cieza reports mitimaes near Latacunga, and another group was located near Quero, also in *Panzaleo* territory. Farther north, Zambiza, Carapungo, Yaruquies, and Cotocallo were all peopled by southern colonists. Such foreign enclaves within the aboriginal population served as focal centers of *Inca* influence and domination, and today, some of these settlements can still be distinguished by the dress and customs of their inhabitants. There were no colonies of mitimaes north of Tumbez on the Coast.

In addition to such obvious devices as movements of peoples, the Empire influenced native life in many other ways. New crops like sweet manioc (yuca), oca (*Oxalis tuberosa*), sweet potatoes, and peanuts were introduced at this time. Llamas were brought north in large numbers and provided Ecuadoreans with a beast of burden and a new and reliable protein supply. Wool was added to the textile fibers used. Daring irrigation canals considerably increased the cultivated area. The cultivation and chewing of coca leaf, a mild narcotic, was started in the area and quickly adopted by local groups. It assumed considerable importance in certain places, such as Pimapiro, in *Cara* country, where large fields were devoted to its cultivation, the leaf being traded far and wide and becoming the sole crop in certain places. Indians from Pasto and Latacunga and even from Sigchos came here to get the drug. The craving was such that Pimapiro inhabitants were known to let strangers cultivate their lands, while they limited themselves to collecting rent. Coca was added to salt and ají as a ceremonial food in certain areas.

Mitimaes and administrative necessity encouraged the use of the *Inca* language. It soon became a "lingua franca" throughout the country, and is referred to as the "lengua general de los ingas" by the chroniclers. Cieza states that its teaching was compulsory and parents were punished for neglecting to teach it to their children. This rule was never seriously enforced, as in many areas only few spoke the "general language," and everywhere native tongues and dialects survived.

The *Inca* encouraged urban settlement in such places as Tomebamba (modern Cuenca), Liribamba, and Quito. Otherwise, people continued to live dispersed in the countryside, gathering occasionally at the chief's house or the huaca, the sacred spot of the community. Fortresses with accompanying garrisons were built throughout the Highland, sometimes coinciding with urban centers such as at Caranqui, Cochasqui, Quito, Latacunga, Mocha, Tiquizambi, and Tomebamba, and at other times being located in strategic positions such as Guamaltan, Tuza, Guaillamba, Cayambe, Muliambato, Tiocajas, Chanchan, Ingapirca, and Cañaribamba.

The extensive road system built by the *Inca* was extended to include Ecuador, and, although the Coastal highway was not extended because of the jungles in the western lowlands, the mountain road connected Tomebamba and Quito with Cuzco, the capital of the Empire. The native population helped build and later service these roads, a task that afforded additional acculturational contacts.

Similarly, the construction and support of various temples to the Sun and convents for the Sun's virgins affected native religion, although aboriginal deities and beliefs were tolerated.

The effect of *Inca* domination on native social organization is not easy to estimate because of lack of sufficient concrete data. On the Coast, which the *Inca* never actually controlled, imperial influence was weak and indirect, but, nevertheless, gave a terrific impetus to the development of native coastwise commerce. In the Highland, the tremendous movements of population, the raising of armies and the implicit collective action, the building of cities, fortresses, temples and roads, the facilitation of intertribal communication, and the increased material well-being, all must have combined to speed up the process of increasing social cohesion between native Ecuadorean groups. Even before the *Inca* conquest, isolated villages had acted together; after it, such cooperation became commonplace, and one can discern almost national feeling and solidarity in Rumiñahui's ability to raise large multilingual armies in an attempt to stop the Spanish invasion.

The *Inca* conquest encouraged incipient native social stratification and reinforced the local chieftain's authority by placing many new imperial administrative responsibilities on his shoulders. It trained his sons in the ways of Empire, thereby perpetuating leadership within one family group. But we know very little of the actual events and can only guess at their content. Yanaconas, or "slaves," were at work on Ecuadorean soil, but how they were recruited in the local situation or what their ethnic background was is not stated. Temples to the Sun and concomitant obligations to till the temple's land were introduced, but we know very little of aboriginal land tenure and how it was affected by the new dispositions.

Inca dominion over Ecuador was short lived and not very thoroughgoing in such fields as sacred belief, where traditional attitudes and mythology survived. It undoubtedly had a profound effect on such elements as subsistence, land tenure, and social organization.

COLONIAL AND MODERN CONDITIONS

Ecuador was incorporated into the Spanish Empire soon after Pizarro's Conquest of Perú. The Conquest was carried out in 1534 by Sebastian de Benalcázar, a lieutenant of Pizarro, who penetrated the country from the south and conquered it with the help of the *Cañari*, who served as guides and allies. About the same time, Pedro de Alvarado, Governor of Guatemala, landed near Bahía de Caraquez with a large following and entered the country from the west, crossing the lowland jungles and ascending to the Andean plateau only to find Benalcázar and Almagro, Pizzaro's representatives, ready to receive him and buy him out. The first Spanish city on Ecuadorean territory, Santiago de Quito, was built by Almagro in *Puruhá* country, near Riobamba. Soon afterward, San Francisco de Quito, the present-day capital of Ecuador, was settled by Benalcázar. It was the beginning of Spanish Colonial rule, which lasted into the 19th century and which seriously affected Indian life.

The new civilization built in the Andes was based on stable settlements in the new lands and their exploitation for the benefit of the Crown and of the conquerors. The backbone of the new civilization was the Indian, now Christianized and thoroughly incorporated into the structure as a subordinate, laboring group.

Many European crops were introduced into the Andes and all European domestic animals. Wheat and, particularly, barley took very well to the new environment and were rapidly adopted by the Indians. Horses, mules, cattle, hogs, and sheep were acclimated, and, though the Indians were prohibited from owning horses for a long time, they took very readily to sheep and chickens, which they could easily raise on small native holdings.

The conquerors came from a feudal world where the landed gentry formed the dominant group and enjoyed the privileges afforded by the society. Though many of the conquistadors were not noblemen themselves, they carried in heart and brain the picture of status and rank considered desirable in the mother country. In the new lands, they wanted to settle and carry on the old medieval tradition with themselves as the ruling and controlling group and the Indians the subject people.

In addition to desire for upward mobility, the conquerors were driven by a strong faith in Christian doctrine and a zealous intent to implant it among the heathen. The Christianity which Pizarro, Valverde, and their men brought with them, the grim religion of poor, landless Andalusian peasants, relied heavily on compliance with the outward, explicit ritual, and ignored simultaneously the emphasis on the brotherhood of man. Therefore the Catholicism they introduced into the Andes, the all-powerful magic of the obviously superior and successful conqueror, spread among the Indians a thin veneer of formal practices coexisting everywhere with native ritual and belief. Feudal White superordination and Catholicism were the bases of the new civilization.

The Conquest had disturbed native organization, and the first steps taken by the conquerors were to reintroduce a semblance of order. Spanish towns were founded, and by June 1535, lands were assigned to various settlers by Sebastián de Benalcázar.

Spanish settlement proceeded very rapidly, and soon the whole country and the population were theoretically divided among the conquerors. By 1548 the crown had difficulty finding Indians to build a royal house, and about the same time Cieza, discussing the situation in *Pasto* country, says that all the lower, fertile valleys were taken over by Christians, while a numerous population had withdrawn to the mountains. In general, the Indians resisted Spanish settlement and spoliation. Indian chiefs were executed for refusing to disclose the sacred hiding places of ceremonial gold objects, and many revolts were drowned in blood, but usually the natives withdrew from the favorable lands occupied by the Spaniards into the bleak páramos of the Andean Plateau or down into the Tropical Forest.

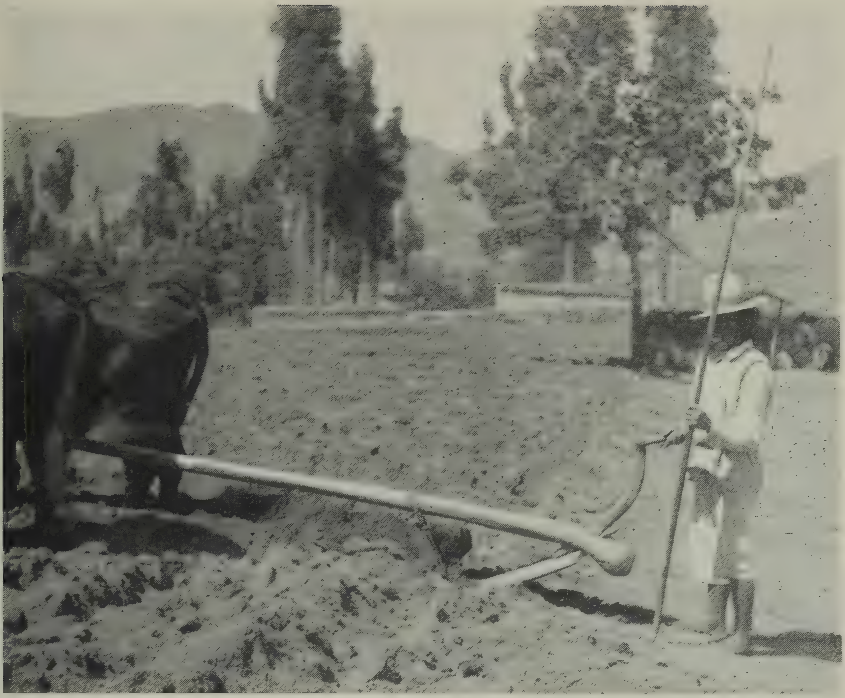
The occupation of Indian lands by the Spaniards took many forms, but the most common, here as elsewhere in the Empire, was the encomienda. Spanish law assumed that the newly conquered lands belonged to the Crown and could be given away by the King or his representatives. Thus, the Crown granted the land and its inhabitants and resources in gratitude for past services to most of the men who participated in the Conquest. The beneficiary and his son had in usufruct, for the duration of their two lives, the land and its produce through a tribute in cash and kind which every able-bodied male member of the Indian community had to pay. In exchange, the encomendero took care of the spiritual welfare of his charges and saw to it that they were properly baptized and indoctrinated. The encomendero also had the obligation of defending the new country against attack and, to that end, of keeping arms and horses in readiness. Originally, the size of encomiendas was supposed to be regulated but very soon some grew to tremendous proportions while others remained small farms. There were also elaborate rules governing the treatment of Indians: the laws of the Indies are full of strict regulations protecting the natives and ensuring their welfare. The size of their tribute was limited, and the encomendero was to pay the annual estipendio to the priest from his revenue. Most historians agree that these rules were rarely obeyed and that the obligations incurred by the Indians without their consent weighed heavily on them.

Thus, at the end of the 16th century, a Highland community in the Chimbo Valley numbering 1,254 able-bodied male Indians paid the following annual tribute to their encomendero: 2,508 gold pesos, 1,254 cotton blankets, 627 fanegas (1,003.2 bushels) of maize, 627 fanegas of barley, 600 lbs. of salt, 30 pigs, 2,508 chickens. In addition they paid the priest an annual camarico consisting of 80 bushels of maize, 40 bushels of wheat, 50 sheep, 12 pigs, 600 lbs. of salt, 20 eggs each fast day, and 1 chicken each ferial day.

About the same time, the lowland community of Colonche consisting of 145 able-bodied male Indians paid the following annual tribute: 84½ pieces of cloth, 135.2 bushels of maize, 850 lbs. of salted fish, 253 chickens, and 27 loads of cotton.

These obligations were considered heavy by the natives. Ponce de León wrote that the Indians of Otavalo had lived longer in the past because they did not have to pay such heavy tributes and that at Paute in the *Cañari* area, men frequently left the settlement to work at Cuenca so as to earn the cash part of their tribute, thereby seriously disrupting the functioning of the native community.

But not all Indians lived on encomiendas. Many areas were considered poor, unproductive, and undesirable. These usually remained Crown lands, and the Indians on them paid their tributes directly to the authorities in Quito. Some Indians had disappeared into the lowland jungles beyond the jurisdiction of both secular and temporal authorities, but many continued to live in settlements widely scattered out over the mountains. Pedro de la Peña, the second Bishop of Quito, secured the King's permission in 1572 to resettle the "free" Indian population in reducciones. The natives were to be collected from their hills and resettled in conveniently accessible valleys, in Spanish-style villages. Spaniards were prohibited by law from entering these villages or interfering with the square league of arable soil surrounding it. The Indians were exempt from tribute the first year of settlement. They offered much resistance to this plan which facilitated the collection of taxes, strengthened Church control of the population, removed the native groups from their sacred shrines and burying grounds, and frequently brought together peoples of diverse ethnic affiliations. Nevertheless, Indian towns under Spanish



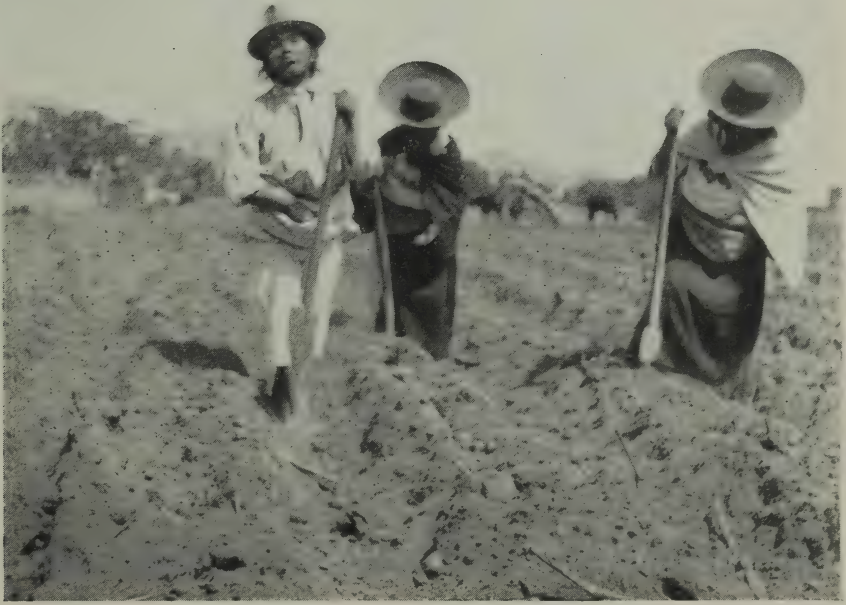


Plate 161.—**Otovalo agriculture.** *Top:* Plow. (Courtesy Parsons' estate.) *Bottom:* Using digging stick made of eucalyptus wood. (After Parsons, 1945, pl. 6.)

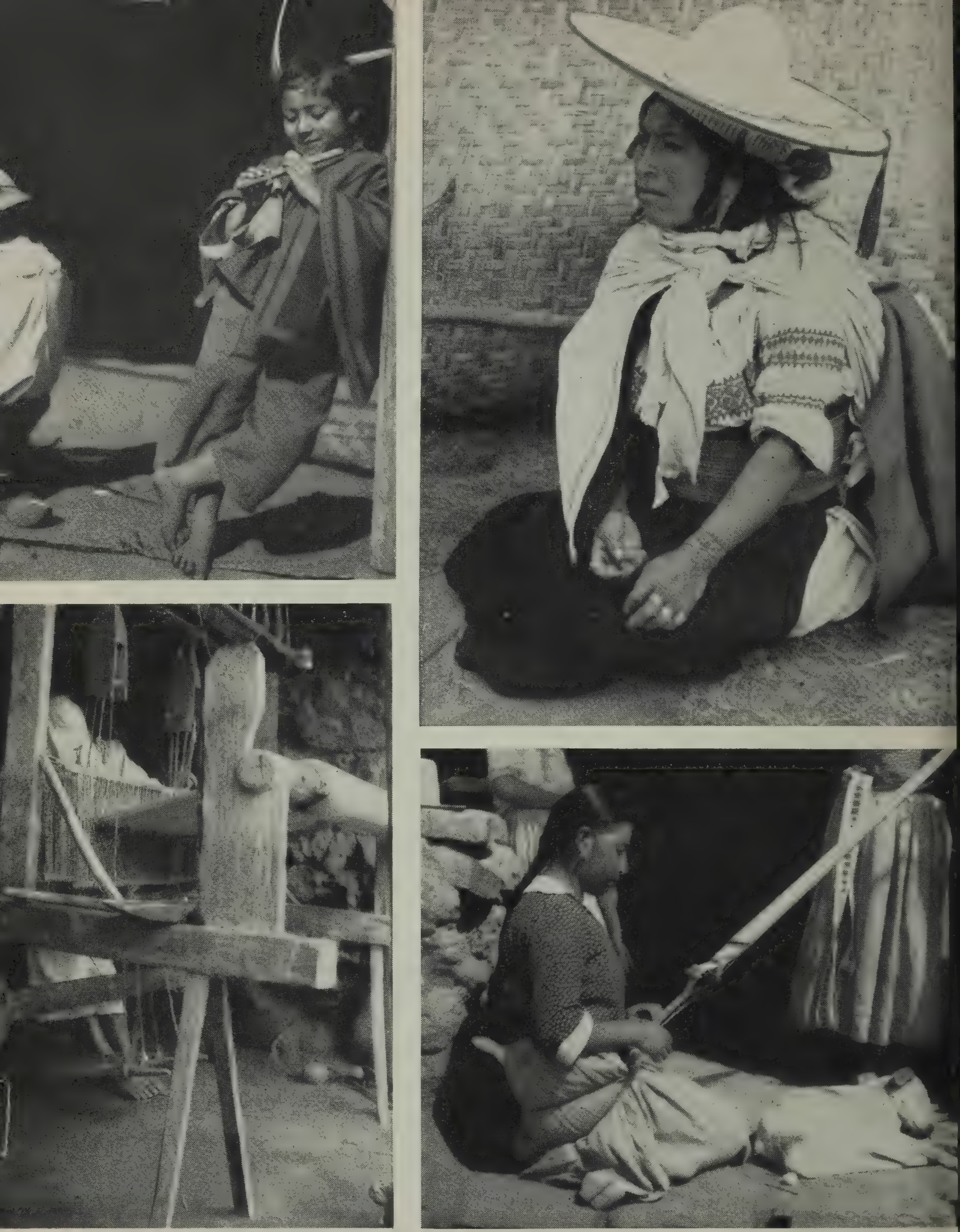


Plate 162.—**Otovalo Indians.** *Top* (*left*)*:* Children's clothes are a faithful miniature of adult wear. *Top* (*right*)*:* Woman at market. *Bottom* (*left*)*:* Spanish loom for weaving tweeds for city trade. *Bottom* (*right*)*:* An Indian loom. (After Parsons, 1945, pls. 16, 20, 14, and 13.)

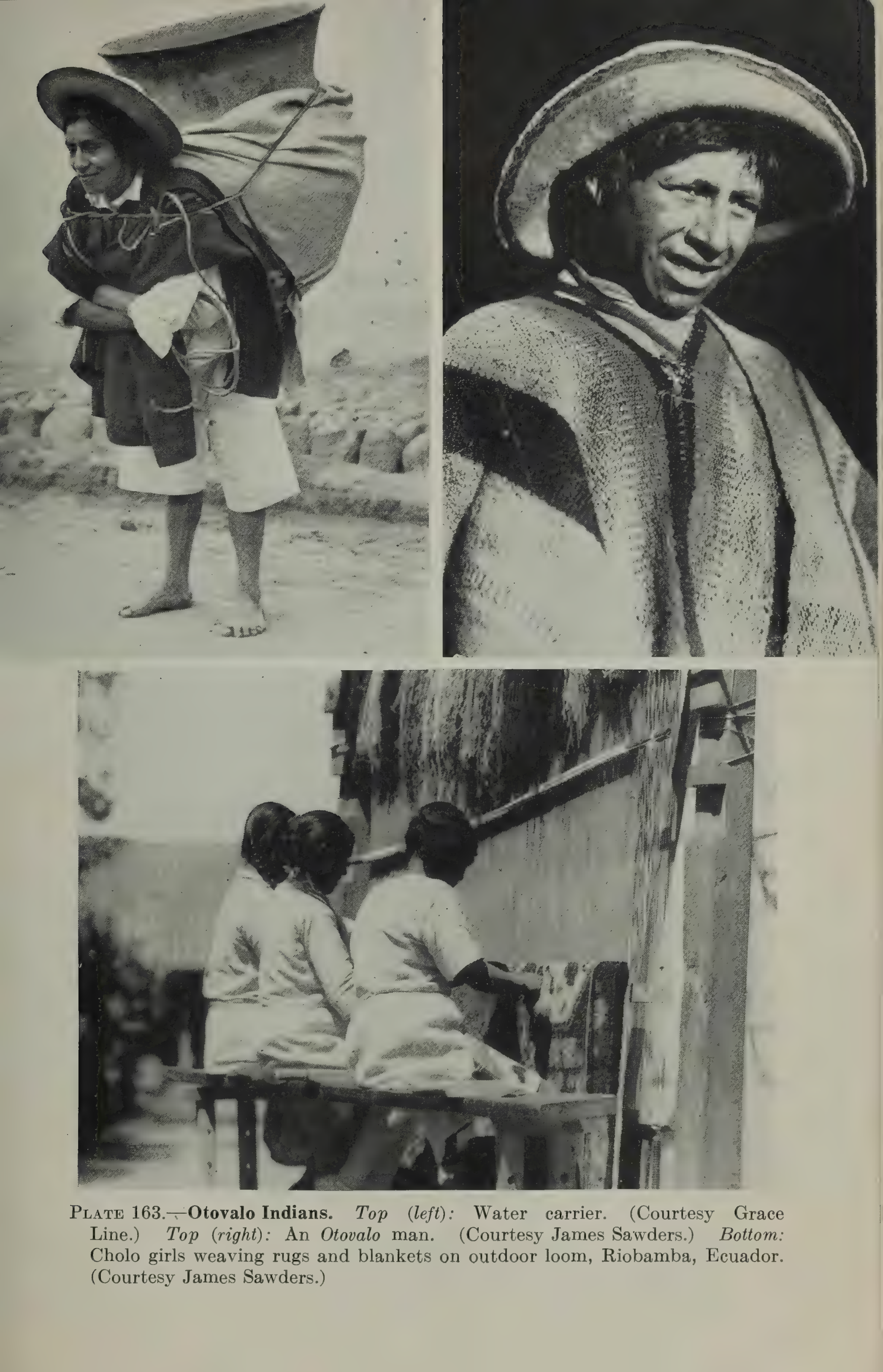


Plate 163.—**Otovalo Indians.** *Top (left):* Water carrier. (Courtesy Grace Line.) *Top (right):* An *Otovalo* man. (Courtesy James Sawders.) *Bottom:* Cholo girls weaving rugs and blankets on outdoor loom, Riobamba, Ecuador. (Courtesy James Sawders.)

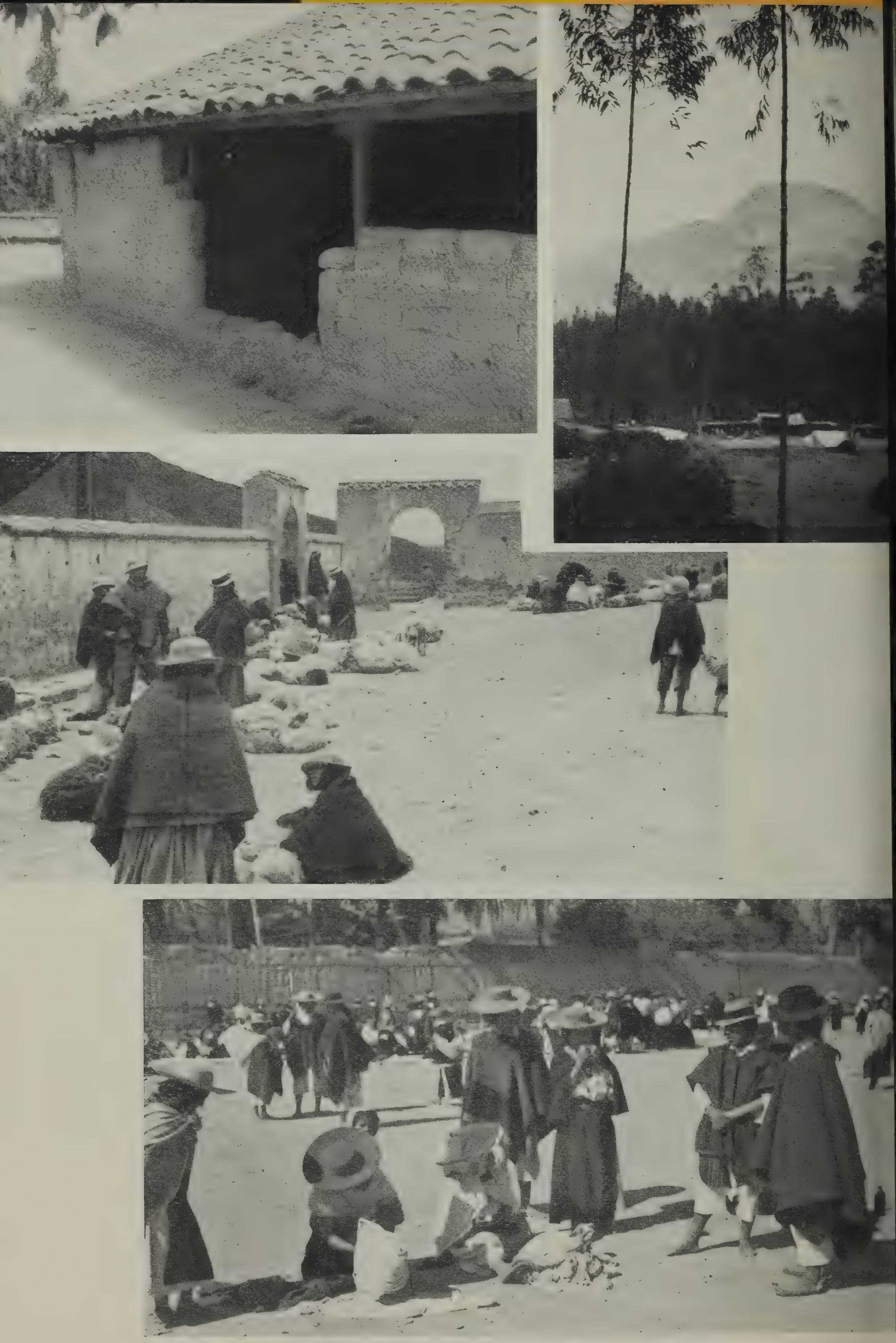


Plate 164.—**Otovalo scenes.** *Top (left):* Yard and corridor of house. *Top (right):* San Juan chapel and plaza with booths. (After Parsons, 1945, pls. 2 and 26.) *Center:* Women holding sheep so men can shear them, southeastern Chimborazo. *Bottom:* Selling crude wool at Otovalo. (Courtesy Donald Collier.)

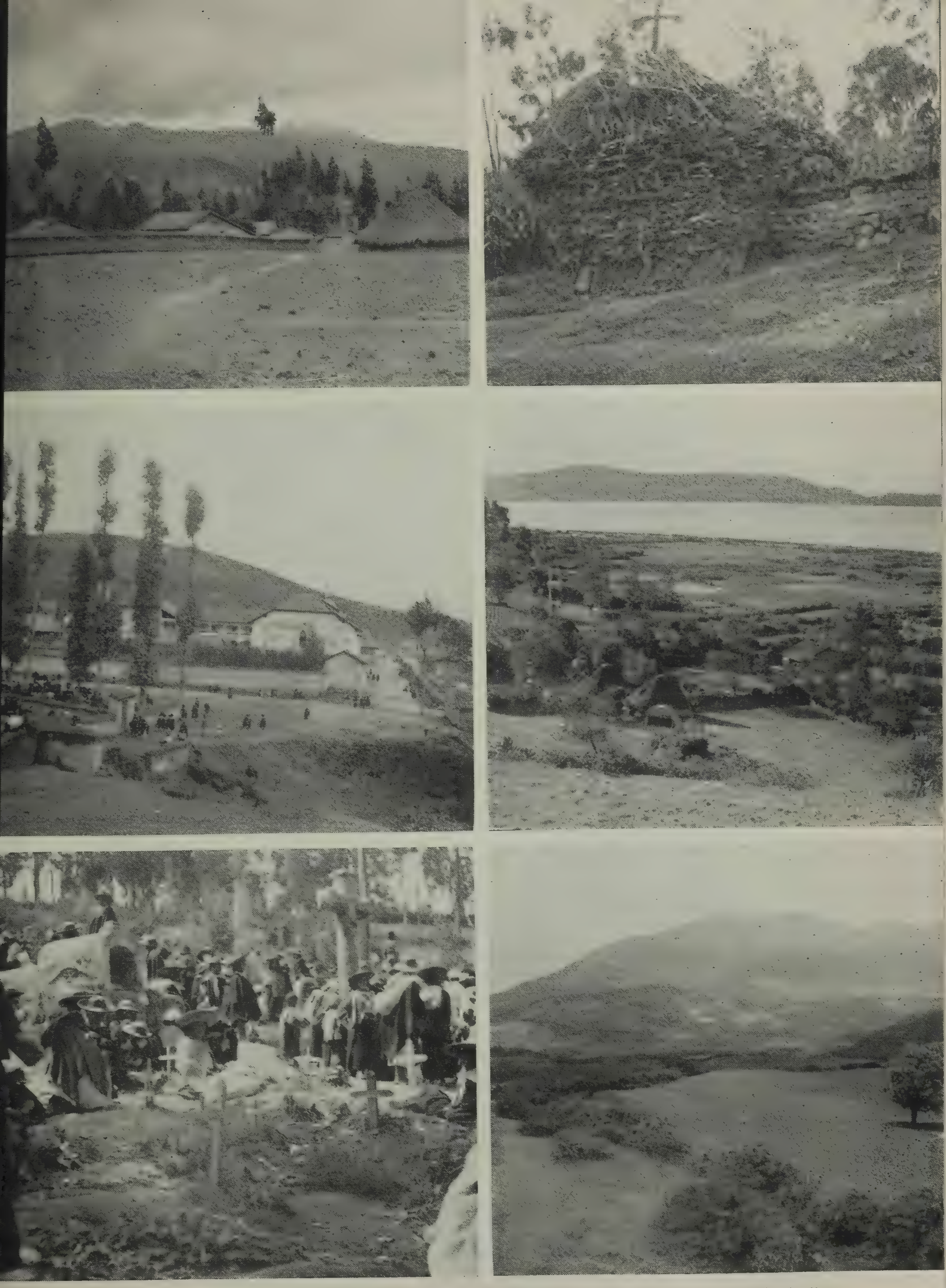


PLATE 165.—**Ecuadorean Indians and landscapes.** *Top (left):* Peguchi houses. *Top (right):* A "sarae pungo," or corn stalks stored for use as fodder, Otovalo area. *Center (left):* Saturday cattle and horsmarket, Otovalo. *Center (right):* "Chacras," or small holdings at San Pablo. *Bottom (left):* Indian section of Otovalo cemetery on All Saints Day. *Bottom (right):* The Río Blanco Valley between Otovalo and Cotacachi. (Courtesy Parsons' estate.)

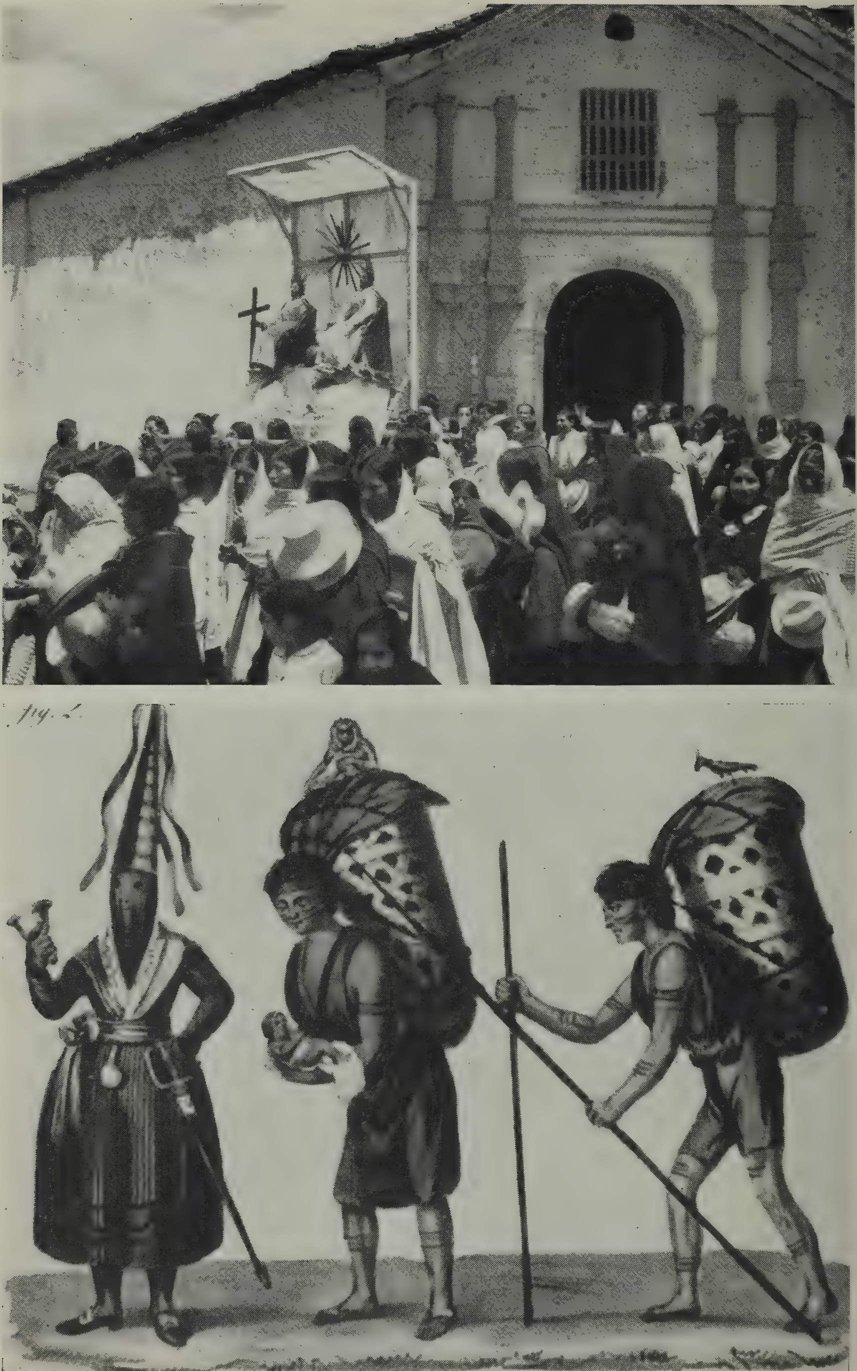
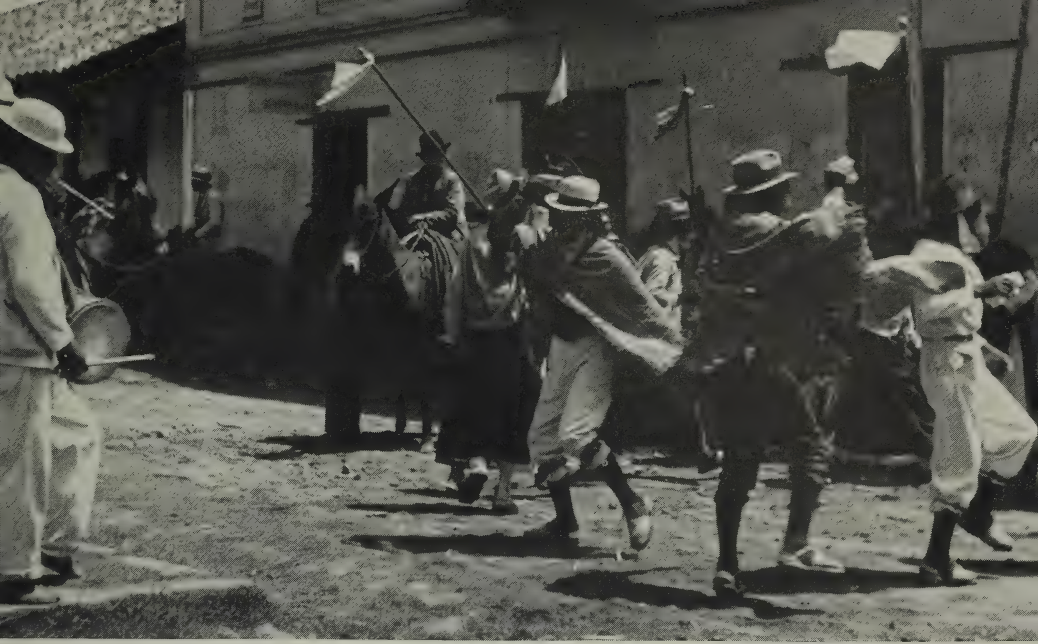


PLATE 166.—**Modern and 18th-century Indians of Ecuador.** *Top:* A crowd of Indians and Cholos (Mestizos) in an outdoor procession near Loja in southernmost Ecuador. (Courtesy Donald Collier.) *Bottom:* 18th century. On left is a *Cuchurucho* Indian begging in church; right, *Yumbo* Indians of Quixos traveling. (After Osculati, 1854, pl. 6, fig. 2.)



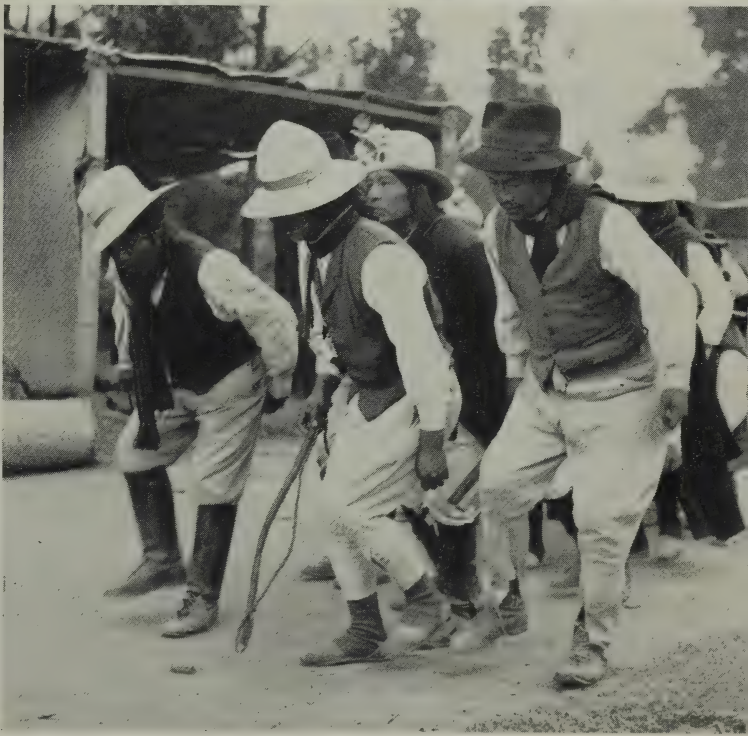
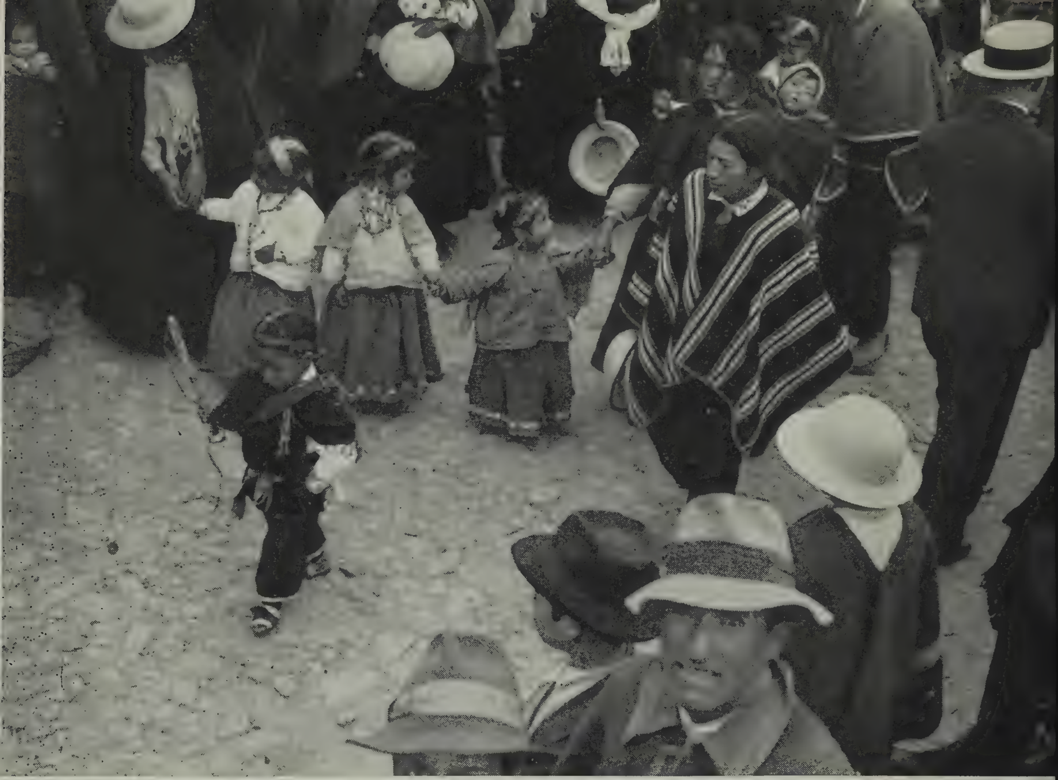


PLATE 167.—**Otovalo Indians.** *Top:* Conquista dancers (men) impersonating women. *Bottom:* Negrito dance with Indians dressed as white overseers. (After Parsons, 1945, pls. 35 and 29.)



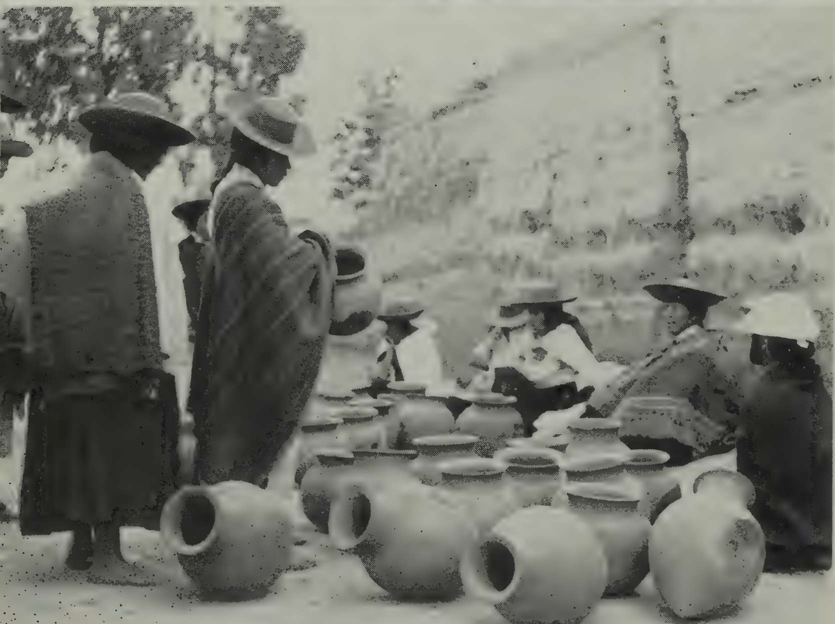


Plate 168.—**Ecuadorean processions and markets.** *Top:* Part of a New Year's procession at Cañar. (Courtesy Donald Collier.) *Bottom:* Otovalo pottery market. (After Parsons, 1945, pl. 10.)

control became a regular feature of the Andean landscape. Means estimates that about half of the Indians lived on encomiendas, one-fourth in these Indian towns, and another fourth had escaped regimentation by withdrawing into inaccessible parts of the country.

After the destruction of the Imperial State structure, the Spaniards were willing to preserve the formal aspects of *Inca* political organization on a local and regional scale. The Viceroy of Toledo was particularly eager to maintain and augment the prestige and authority of the native chiefs, which had been seriously damaged during the Conquest and the resettlement period. Former curacas (chiefs) or their descendants were reinstated wherever they had been deposed. Thus Don Sancho Hacho, direct descendant from the old chief of Latacunga, who had helped various imperial expeditions with men and supplies, was made a nobleman by the King on Governor Nuñez de Bonilla's recommendation, was granted various Indian settlements in *Panzaleo* country, and generally enjoyed the privileges of the dominant group. In 1606, the cacique of Caranqui "controlled" all Indians between the Mira River and the town of Ibarra. At least one of Atahuallpa's sons was given a repartimiento, and, as late as 1631, an Indian Queen of Quito was recognized at least on festive occasions. Native cacicazgo, or chieftainship, was recognized and reckoned with till the middle of the 18th century.

Under these chiefs, a hierarchy of lesser officials, alcaldes, and alguaciles, all Christians and presumably elected by the heads of households, supervised the collection of taxes, ensured the participation of Indians in public works, and generally carried through the conquerors' policies. In return for their services, native authorities received wood and straw from their subjects as well as aid in harvesting their own crops. While the regional curacas received privileges and titles from the Spaniards, local whips were not much better off than their charges, and one chronicler complains that chiefs in the Ambato area were too poor to attend to their civic duties.

The whole Indian hierarchy was topped by a vice-regal appointee, always a Spaniard, known as corregidor de indios, who lived in Indian towns and presided at the meetings of their councils. In 1610 when such a corregidor was appointed at Ibarra, in the heart of the *Cara* country, his duties were outlined as including the maintenance of peace and justice; watching over the treatment, conservation, and multiplication of natives; preventing Spaniards, Negroes, and other aliens from settling in Indian villages; seeing to it that Indians kept busy and did not leave the reducciones; preventing abuse by Whites and by Indian chiefs; and, finally, the collection of taxes.

The Spaniards divided the Indian population into several categories. The basis of the structure was the tribute-paying, able-bodied adult male agriculturist, known as a tributario. Those under 18, too young to pay taxes, were preservados and those too old, over 50, reservados. In addition to these categories which took care of all "free" and encomienda Indians, the Spaniards maintained the subordinate status of the yanaconas, the alien slaves of the *Inca*. While some were settled in villages under the regular tribute system, others, frequently referred to as camayos as well as yanaconas, lived in the Spanish towns and engaged in crafts or in domestic service.

Agriculture remained the basic occupation of the aboriginal population. But as the country expanded, new towns were built and demand arose for specialized products and services. All of them depended on Indian labor and required considerable readjustment of native life.

Thus, natives were assigned to the cleaning of city streets, the maintenance of roads, and the carrying of mail. These duties were similar to services exacted by the *Inca*, but they were soon augmented by obligations to help erect and maintain Spanish cities. Thus, when the town of Ibarra was built in the beginning of the 17th century, 300 Indians from as far as the *Pasto* and *Quillacinga* territories were brought in and used as bricklayers and laborers for several months at a stretch. Although the corregidor had provided for cash and kind payments, *Pasto* chiefs frequently complained that the conditions were not respected and that the numbers of those recruited was frequently larger than authorized.

Probably more Indians were used in mining than in any other Spanish activity. Ecuador is not so rich in minerals as Bolivia and Perú, and mining was limited to the southern part of the country, inhabited by the *Cañari*. The first regulation of gold mining in this area was issued in 1537, only 2 years after the Conquest. By 1544, thousands of *Cañari* were working in gold mines and had already extracted 300,000 pesos worth of gold. By 1592, the Indians in the Zaruma area, El Oro Province, were dead of disease and overwork, and the owners of the mines sent long, wordy presentations to the King asking for permission to bring in Indians recruited farther north, beyond the *Cañari* country. The document points out that in the northern areas there were still many free Indians not living on encomiendas, and that they avoided the payment of rightful taxes and thus prevented the King from collecting his royal fifth. As no Indian will ever work in a mine of his own free will, continues the document, it is considered necessary, to ensure the cooperation of native rulers and Spanish authorities everywhere, to recruit the necessary labor force. Eventually, the Viceroy of Toledo changed the tribute from kind to cash to encourage work in the mines, and settlements were built around the pits to take care of the new arrivals from as far north as Saquislí and Otavalo. The different ethnic groups were kept apart under their own headmen, and priests were brought to catechize them.

In addition to mining, textile production in obrajes or cloth factories became an important activity in *Panzaleo* and *Puruhá* territories. Some of the obrajes belonged to the Indian communities, and their produce was used to clothe the population as well as to pay part of the tribute. The Indian community at Latacunga owned a large shop where a whole piece of cloth (one man's annual tribute) could be turned out in a day. Most obrajes were owned by Whites, who used Indians and Negro slaves to produce wool and cotton cloth under conditions not propitious to the development of Indian life, as the weavers were rarely allowed to return to their settlements.

Native trade increased in importance during the Colonial Period. While most contacts between Highland and lowland tribes diminished in intensity, certain trade routes were developed, particularly that following the Chanchan Valley. Salt, fish, and cotton were lowland commodities always in demand in the Highland, and cabuya fiber, hogs, and other mountain products went west in exchange.

On the Coast, Spanish settlement was less intensive because of the tropical climate, and because it met with more successful opposition by the natives. By 1582, the *Manta* and *Huancavilca* were decreasing at such rapid rate that a "conservation" program was being advocated. For a time, Highland Indians were brought down to work on olive fields and vineyards, but these crops were unsuccessful and the Highlanders could not adapt to the tropical sun. Native organization was completely smashed on the Coast, and today there are no Indians west of the Andes, except small bands of *Cayapa* and *Colorado*, who live in the forests on the slopes of the mountains.

In Esmeraldas, the Spaniards' attempts to people the area were particularly unsuccessful. Very soon after the Conquest, the area became a refuge for various Highland Indian groups escaping persecution and for Negroes revolting against slavery. In the early part of the Conquest, a group of slaves had escaped from a slave ship and settled in the area. They mixed with the Indians and soon controlled a large part of Esmeraldas. After several unsuccessful punitive expeditions, the Spanish authorities and the Church accepted the de facto situation and recognized one of the slaves, Illescas, as ruler of the area. Contemporary chroniclers speak of the inhabitants of northwest Ecuador as wild mulattoes and sambos, knowing no law and waging war at the slightest provocation.

The population of the Coastal areas became known as montuvios. Racially, they are a blend of White, Negro, and Indian genes in various proportions, with the Negro dominant in the north and the Indian in the south. Culturally, the montuvio has been historically an Ecuadorean, meaning a non-Indian farmer cultivating rice, maize, beans, and pineapples, and working on large cacao, indigo, and rubber plantations.

Colonial Ecuador lasted for almost three centuries, and in that time Indian life underwent gradual and consistent change. The native, pre-*Inca* languages died out some time in the 18th century, and *Quechua*, the idiom of the southern conqueror, became the "lingua franca" all over the Highlands. Though seven priests were assigned in 1593 to study a series of native languages in order to be prepared to preach in the vernacular, no catechisms or confessionaries have come down to us as evidence of their labor, and the languages are almost completely unknown. Native political organization decreased in importance and eventually disappeared for all practical purposes. Native landholdings decreased everywhere as the encomienda gave way to outright Spanish ownership, the implied temporary tutelage being replaced by permanent serfdom. Some of the Indians learned how to read and write, some were now skilled artisans, and many more had learned how to use the White man's efficient tools. But in time, more and more of the old meanings were lost and only very few new ones were added.

Independence from Spain and republicanism meant little to the Indian. In 1830, Ecuador's first president, Flores, continued the validity of the royal Laws of the Indies, in which many noble thoughts are expressed and through which basic serfdom is sanctioned. An attempt in 1833 coercively to educate the Indian collapsed when the only means of financing the program proved to be the sale at public auction of the few remaining native holdings. For 35 years after independence and the proclamation of equality for all, Indians continued to pay tribute as in 1550. And not until 1918 were imprisonment for debt and the son's inheritance of the father's financial obligations abolished by law.

Indian life today brings the native into close contact with the dominant, Ecuadorean civilization. Fifty percent and maybe more of the population is Indian and at least half of it is landless, totally dependent on employment by Whites. The rules governing Indian-White relations were set a long time ago and have survived in large measure the recent legal changes.

As in aboriginal and Colonial times, the modern *Quechua*-speaking Indian continues in agricultural pursuits, cultivating maize, beans, and potatoes in the more accessible valleys (pl. 165), with barley becoming important at high altitudes (pl. 161). Sheep herding is also important in certain areas. Indians live in settlements called parcialidades, or anejos, which are as of old, distributed widely through the hills. The houses are most frequently thatched adobe huts built by the natives themselves with neighborly help (pl. 164, *top*). Around the house the Indian plants his crops and keeps pigs, sheep, chickens, and guinea pigs. The house, the land, and the settlement of which it is a part are the most important items in the Indian's life.

In general, we can distinguish three types of Indian land occupation. The most important group numerically is the hacienda Indians, known as conciertos, or peones. They include all landless Indians and all whose holdings are too small to provide them with a living. In the past, the concierto was very effectively tied to the land through a system of advances and debts which he never managed to reimburse. Imprisonment for debts was lawful until the end of World War I, and a son was usually held responsible for the debts of his deceased father. A concierto usually spends his whole life on the land of an hacienda, cultivating the same plot and inhabiting the same house, known as huasipungo, which is provided by the landowner. In exchange for these facilities, he owes as much as 5 days of labor a week, frequently without any cash remuneration. In addition, younger Indian couples spend a month a year as huasicamas, domestic servants, in the house of the owner or administrator.

The second basic adaptation of Indian life is that of the suelto, the Indian who may own a little land, but who, because of his proximity to urban centers, prefers to work in town or to hire out during harvest time for a limited period and a well-defined salary. His independent status is much preferable from the point of view of development of native participation in the life of the nation. The number of sueltos is much smaller than that of the conciertos but is increasing since the abolition of debt imprisonment and the recent opportunities to acquire parceled-out haciendas which are made available to the Indian.

There are several intermediate forms of native-White adjustment, such as sharecropping, the obligation to perform agricultural tasks in return for certain rights, such as the use of pasture and irrigation water, and the permission to trespass, but they basically reflect the coexistence of a large majority of landless agriculturists and a minority of huge estates frequently absentee-owned. The Highland produces mostly crops for internal consumption, depending exclusively on the work of the Indian. In many parts of the country, the estates are growing, particularly in Carchi and Chimborazo Provinces, thereby seriously threatening native holdings. At the same time, Indians have been able to acquire land in Imbabura, Loja, and recently in Azuay, and have everywhere tried to increase their possessions.

A third basic adaptation is the Indian comunidad, the isolated mountain settlement that has managed through 400 years to maintain its independence and to resist encroachment by Whites. Such groups are usually quite uncooperative, and even the priest has to be escorted in and out on holy days. Nobody knows how many such communities there are, but they are not very numerous.

Finally, in recent years a new Indian adjustment has been emerging which, rejecting the century-old dilemma of peonage or hard-shelled isolation, emphasizes craftsmanship as a new source of revenue. The best and, at this writing, probably the only example are the Indians around Otavalo who yearly produce many thousand woolen ponchos, a garment worn by Whites, cholos (Mestizos and acculturated natives), and Indians alike throughout the Sierra. In addition, they weave tweeds and homespuns for the Whites in the cities (pl. 162). The rewards of this craftsmanship have been most gratifying as a source of both revenue and rejuvenation of Indian structure and self respect. The community still looks at weaving as an unusual source of cash money and invests all profits into land and not into additional looms, agriculture still being considered the only long-range secure occupation and land ownership the paramount source of wealth. The weavers still wear Indian clothes, their hair long and braided, speak *Quechua*, and supplement formal Catholic observances by curing with eggs and guinea pigs as well as divining against sorcery. The acculturating effects of participation in a competitive money economy are nevertheless visible: Otavalo Indians acquire city goods, their children go to school in fair numbers, they travel long distances to dispose of their merchandise, and they show considerable independence in their dealings with the White man.

Throughout Ecuador, native political organization has disappeared. Here and there a native alcalde will represent the authorities in getting Indians to take part in public works and perform other tasks assigned them. Such alcaldes do not carry any real leadership functions in the community and are recognized as representatives of the superordinate group.

Among hacienda Indians, authority is usually carried by the mayoral, mostly a cholo but sometimes an Indian, who represents the owner and assigns the given tasks of the day. Among themselves, Indians recognize the authority of elders but no formal structure can be discerned. Neighbors and friends will frequently help each other with the more difficult tasks such as house building, well digging, and others, and the job is cheerfully performed as in olden times, without remuneration beyond lunch and chicha, the national maize beer. Such assistance, known as minga from *Inca* times, has been utilized by both landowners and State to secure Indian assistance on such projects as road building, harvesting, and construction work.

The Indians of the Ecuadorean Andes are a very religious, Catholic group (pl. 166, *top*). Rivet has observed that religion is the only plane on which Whites and Indians meet with a semblance of joint participation. There seems no evidence that such participation extends beyond the common use of church facilities and the services of the priest. Indian Catholicism, although passionately held, is only formally similar to Ecuadorean and other Catholic observance. While the Indian still pays tithes and first fruit to the church, which most Whites do not, he also firmly believes in the ancient origin myth which derives the people from a local volcano, in the bad omen character of the rainbow, and in the curing effect of extracting disease-causing worms from the neck of the patient through incantations and magical formulae. Catholic observances, such as baptism and Mass, and Christian beliefs, such as heaven as a reward for good conduct, have been smoothly incorporated into native life and coexist efficiently in native thinking.

A feature of Indian Catholicism which has frequently been opposed by both Church and State is the cargos. Each able-bodied male Indian is expected at some time during his twenties to assume the responsibility of giving a large fiesta in the honor of a saint, to which all members of his settlement are invited. Fireworks, street processions, drunkenness, and dancing are integral parts of the procedure. A man who has not yet assumed this responsibility is not considered a full-fledged adult. It has been suggested with some justification that the cargo is a remnant of an extinct social and religious hierarchical organization, such as can be found in the cofradias of Highland Guatemala. In such a case, it is a very hardy and well-integrated remnant. Repeated attempts have been made to eliminate it, because it makes the beneficiary incur large debts in an effort to sponsor a worthy ceremony and encourages wholesale drunkenness. In 1904, Archbishop González Suárez prohibited the clergy's participation in the proceedings, but this did not deter the Indians from continuing to carry out an important initiation ceremony.

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THE ARCHEOLOGY OF COLOMBIA

By Wendell C. Bennett

INTRODUCTION

The archeological past of Colombia (map 1, *No. 19*) is a subject of great importance to all scholars interested in the problems of migrations and contacts between Middle and South America, since the location of this country in the northwest corner of the South American continent makes it an inevitable link. Land migrants, proceeding southward through the Isthmus of Panamá, would be led back into the Andes via the north-to-south Atrato, Cauca, and Magdalena Rivers or diverted eastward following the Andean range which curves into Venezuela. The archeology of Colombia should ultimately furnish a record from the time of the earliest hunting nomads to the latest exchanges between the more advanced civilizations. This would be true even in the event that many elements of higher civilizations originated in South America and spread northward from there.

Colombia is likewise of interest because of its marginal position to the complex cultures of the Central Andes. Elsewhere, a detailed picture of the Central Andean pattern has been obscured by the highly developed political organization of the *Inca*. Since that Empire extended only slightly north of Ecuador, the Colombian cultures might be considered representative of Andean development before the period of *Inca* dominance.

The *Chibcha* of Colombia are generally considered to represent one of the major centers of higher civilization in the New World, and, furthermore, archeological remains elsewhere in the country present evidence of considerable technical advancement in the arts and crafts. Consequently, Colombian archeology is a field of interest in itself irrespective of its potential contribution to the history of the Central Andes and to problems of migration and cultural contact between the higher civilizations of Middle and South America.

Finally, Colombia may well have been an important center for contacts between the Andean civilizations and the Amazonian cultures. The Eastern Cordillera extends from Colombia into Venezuela and forms a natural link between the two areas. In Colombia, furthermore, the Tropical Lowlands are not isolated from the Highlands by a high wall of mountains, as is the case in Perú, but rather the two are interlocked at many points. In fact, a general view of a relief map of Colombia gives a picture of the Highlands like a series of peninsulas projecting in all directions into the Tropical Forest sea.

In spite of its potential importance, the archeology of Colombia is still so little known that it is not yet possible to trace a long and detailed history of its cultural development. This is in part owing to the limited amount of archeological work so far accomplished, but it is also attributable to the nature of the archeological finds themselves. For the most part, the remains are not concentrated in certain favorable sites, nor are they of sufficient elaborateness to permit easy arrangement in chronological sequences.

Most of the excavations have been made in the mountain areas of the western third of the country, and but few of these have been directed by professional scientists. Consequently, our knowledge of Colombian archeology is based largely on public and private collections, few of which have been gathered with accompanying data of any kind, and on a series of miscellaneous publications, which but rarely present descriptive reports of actual excavations. This unfortunate situation has been ameliorated in recent years by an ever increasing number of field excavations directed, for the most part, by the Colombian scientists. When these reports of work in progress are published, a much clearer picture of Colombia's past will be possible.

At the present time, the archeological remains can be described in terms of a series of geographic zones, each of which presents one or more distinguishable styles of materials. There is only minor evidence for arranging these styles in chronological order, and actually the zones themselves are not truly comparable. Some, such as San Agustín, Tierradentro, and Santa Marta, have received the major part of the scientific attention, while others, potentially of equally great importance, have been virtually neglected. This situation too is being remedied as archeological exploration advances.

GEOGRAPHY

The geography of the Colombian Highlands has been reviewed in terms of human habitation in the general introduction to this volume. In brief, the Colombian Andes are composed of four major mountain ranges running roughly north to south. The westernmost Coastal range, the Serranía de Baudó, is covered with a tropical rain forest, and little is known about its archeology. The next two ranges, the Cordilleras Occidental and Central, are separated by a rift valley drained by the Cauca River. These mountains have high peaks and form reasonably effective barriers. Although large intermont basins are lacking, many small pockets of habitable land are found in each of the altitude zones. East of the Magdalena River, the Cordillera Oriental runs from south to north, then curves eastward, skirts the Maracaibo Basin, and extends well across Venezuela. Although similar in many ways to the other mountain ranges, it contains a series of extensive, high, intermont basins in the Departments of Cundinamarca and Boyacá. These large basins provide the optimum conditions in Colombia for the development of the Andean culture pattern and were the center of the *Chibcha* civilization. Finally, the isolated Sierra Nevada de Santa Marta is of considerable archeological interest because of the ancient village sites found there, in spite of the fact that the environment seems in no way superior to the other sections.

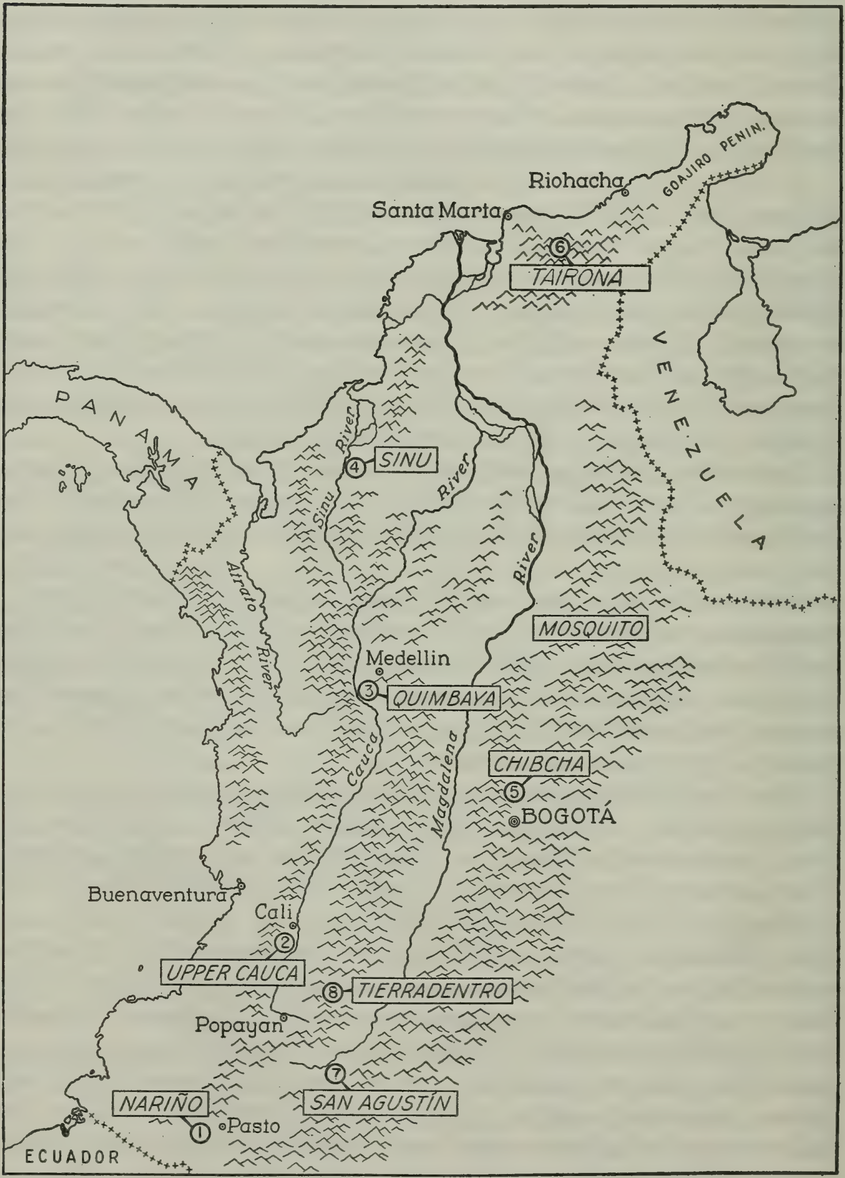
In Colombia, the mountain section has a double rainy season during the year, so that the uplands between 10,000 feet (about 3,050 m.) and the snow line are classified as páramo, or cold wet rain forests. This type of environment is not particularly conducive to the llama and alpaca herding so important in the Central Andes. The Colombian topography likewise effectively isolated many of the cultural units. Not only are the mountain ranges high but the contrasting altitude zones act as barriers against too much shifting from one section to another. Distance is still another factor of isolation.

Except for the large intermont basins of the Cordillera Oriental, agricultural land was largely limited to the mountain slopes. Since the slopes are forest-covered, the slash-and-burn type of clearing must have been as common in the past as it is today. Throughout the Colombian Andes many pockets of fertile soil are available for this type of cultivation, but there are but few areas in which a large population could be concentrated. The extensive flats of the Cauca River valley might seem to be an exception, but in the past these were apparently so swampy and so covered with coarse grass that they could not be utilized by digging-stick agriculturists.

The nature of the archeological sites confirms, in part, this environmental analysis. For most of the country, there is no evidence for large, concentrated settlements. The extensive stone villages of Santa Marta are notable exceptions, and there is still a possibility that further exploration in the *Chibcha* area will reveal more extensive habitation sites. Elsewhere, however, the standard pattern is that of isolated house sites or of a few houses grouped reasonably near to each other. Graves may be located near the house platforms, or may be grouped into irregular cemeteries. This absence of large villages and cemeteries has been an obstacle to comprehensive archeological investigation. Another handicap to archeological exploration is the fact that the pre-Columbians rarely used nonperishable materials, such as stone or adobe, in their construction work, although exceptions are found at San Agustín and Santa Marta. Furthermore, sites with several periods of occupation superimposed are seldom found, so that most of the materials available for study have come from graves.

ARCHEOLOGICAL DIVISIONS

Several authors have described the Colombian archeological materials in terms of geographic zones. In spite of some minor disagree-


Riohacha
GOAJIRO PENIN.
Santa Marta
6
TAIRONA
VENEZUELA
PANAMA
River
4
SINU
Sinu
River
Atrato
River
River
MOSQUITO
Medellin
3
QUIMBAYA
Cauca
Magdalena
CHIBCHA
5
BOGOTÁ
Buenaventura
Cali
2
UPPER CAUCA
8
TIERRADENTRO
Popayan
7
SAN AGUSTÍN
NARIÑO
1
Pasto
ECUADOR

MAP 8.—Archeological zones of Colombia. (Revised from Bennett, 1944.)

ment, eight major zones are generally recognized, each characterized by a dominant style, although other minor ones may be included (map 8). The zones and their representative styles are listed briefly in the following tabulation:

1. Nariño. (The Nariño is the only distinctive style found, although some authors distinguish materials from the neighboring Putumayo region.)
2. Upper Cauca (Calima). (Several styles are recognized for this area, including Río Pichindé, Quebrada Seca, Río Bolo, Quimbaya, and Calima.)
3. Quimbaya (Quindío). (The Quimbaya style dominates, associated with a contemporaneous brown ware incised style.)
4. Sinú. (Only the Sinú style has been found.)
5. *Chibcha.* (*Chibcha* style dominates but some authors distinguish a Guané style as slightly earlier.)
6. *Tairona.* (Although a number of subdivisions are distinguished within the *Tairona* style, all of these are considered to be contemporaneous. Some authors add Riohacha materials, and those generally from the Atlantic littoral, as distinct divisions.)
7. San Agustín. (San Agustín style is dominant, with Mantanzas style and various miscellaneous pieces also included in the area.)
8. Tierradentro. (Tierradentro style is dominant, but San Agustín, Quimbaya, and miscellaneous other materials have also been found.)

The Mosquito style is sometimes added to this list, although so far represented essentially by a type of urn and its modeled cover only. Some authors include the *Chiriquí* style, found on the Colombia-Panamá border, but this is more commonly classed in the Central American division.

These archeological zones are not only unequally known from the point of view of excavations, but there is likewise little evidence for the chronological relationship of styles within any area. Furthermore, there is little overlapping of styles from one area to another. In Colombia, unlike Perú, there are no widespread styles which indicate strong cultural or, perhaps, political influence over great sections of the country. This is quite consistent with the historical picture of the Colombian Indians, but makes the reconstruction of total chronology exceptionally difficult.

DISTRIBUTION AND COMPARISON

Following this general discussion there is a summary of the principal archeological zones of Colombia which demonstrates clearly the difficulty of making broad generalizations. Each zone is essentially isolated, geographically and culturally, and bears only a superficial resemblance to the neighboring areas. In fact, limited distributions are a major feature of Colombian archeology as it is now known.

Stone carving is a good illustration, since it is a common characteristic of the Central Andean Highlands and Central America, and since Colombia might be considered a link between these two regions. However, the distribution of stone statues or of large stone carvings of any kind is still limited to the area of San Agustín and the adjacent region of Tierradentro. Perhaps wood carving was substituted in northern Colombia, but there is no direct evidence of this. The same limitation applies to stone masonry, which the Peruvian and Central American region share in common, since building with stone occurs only in the San Agustín and *Tairona* zones. The rare circles of stone uprights in the *Chibcha* zone could hardly be classed as masonry. The shaft-and-chamber graves are sometimes considered as a characteristic of Colombian archeology as a whole, but their actual distribution is restricted to the Tierradentro, Nariño, Upper Cauca, and Quimbaya zones. This is, to be sure, a continuous geographical distribution and might suggest diffusion, although the ceramic styles found in these graves differs markedly in each area.

Generalizations about ceramics are equally difficult. Red slip and incised decoration are the only features found in each of the known archeological zones. Tall tripods are limited to San Agustín; mammiform short tripods to Quimbaya. Tetrapod vessels are found only in Quimbaya and *Tairona.* Two-color negative painting is found in San Agustín, Nariño, and Quimbaya, but not elsewhere. The three-color negative painting, frequently called a Colombian characteristic, is so far limited to Nariño and Quimbaya. Incised lines filled with white paste occur in the ceramics of San Agustín, Tierradentro, *Chibcha,* and Quimbaya, but it is doubtful if any historical connection is thus implied.

The diversity of the archeological materials causes confusion in determining any extra-Colombian affiliations. Many authors see strong Central American influences in the San Agustín stone carvings, although none occurs elsewhere in the country. The *Tairona* culture shares a number of feaures with Venezuelan archeological types, but there is no evidence of an actual expansion of the *Tairona* culture to that country.

The possibility of Amazonian affiliations is mentioned in the description of several styles. Such features as circular houses, four-legged stools, secondary urn burial, effigy urns, and leg ligatures on modeled clay figures, are all suggestive of Amazonian influence. Probably future work will reveal even more specific connections.

The Nariño zone in southern Colombia is certainly related to Ecuador. At least the typical three-color negative painting is particularly close to the Ecuadorian Tuncahuán style. Although the *Inca* were supposed to have controlled this southern border of Colombia, their influence is not reflected in the archeology.

San Agustín carving is frequently compared with Chavín, in the Peruvian Highlands, although the similarities are quite generalized. If, however, San Agustín is compared with all Early Periods in North Highland Perú, the parallels are more specific. The list would include stone-carved statues, dressed stone, subterranean chambers, box graves, direct burials, and the general stone-carving tradition. In ceramic features, too, San Agustín and Chavín are both characterized by monochrome ceramics, extensive rim variations, and predominant incised design. However, the evidence is still too limited to establish any positive connection.

The Peruvian influences mentioned for the Quimbaya ceramics are far from specific. The Quimbaya modeling suggests Mochica; the double spouts, Nazca; and the three-color negative painting, Recuay. It would appear that the connections, if any, were indirect rather than direct.

CHRONOLOGY

Only the most tentative chronological suggestions can be made for Colombia on the basis of present archeological knowledge. The lack of stratigraphy within areas, the lack of stylistic overlap between areas, and the general paucity of information everywhere make it impossible to draw sound conclusions.

Most authors consider San Agustín to be an early period in Colombia. The culture had certainly disappeared long before the Spanish Conquest. Furthermore, the suggested affiliations of the San Agustín style with such early periods as Chavín and Recuay in Perú, would make its relative antiquity seem plausible. San Agustín presents a number of local characteristics which apparently disappeared at an early date since they have not been discovered in other zones or periods.

Tierradentro style is difficult to place. Since the San Agustín style is found in the same region, future archeological work should certainly verify the relative chronological positions of the two. Superficially, it seems that Tierradentro is somewhat more recent. Actually, there is little similarity between the two styles, and in no case could Tierradentro be called a later development of the San Agustín pattern. Instead, it may some day be shown to represent a later intrusion into the area.

There is no general agreement on the chronological positions of the Nariño and Quimbaya styles. They might both be placed, tentatively, in a general category of "Middle" Periods, because of their suggested affiliations with the presumably early Tuncahuán style in Ecuador and the various Early Periods in Coastal Perú. Nariño and Quimbaya are not only geographically separated, but are unlike each other in many ways. They share in common, however, shaft-and-chamber burials, annular-base open bowls, and the two- and three-color negative painting technique.

Both the *Chibcha* and the *Tairona* cultures were in existence at the time of the coming of the Spaniards, and so can be classed as Late Periods. The Pichindé, Quebrada Seca, and Río Bolo complexes in the Upper Cauca zone might also pertain to the Late Periods. In fact, European artifacts have reportedly been found in some of the Quebrada Seca graves.

Such a chronological arrangement is far from satisfactory since it leaves some zones, such as *Chibcha* and *Tairona,* without known Early or Middle Periods, and others, such as Quimbaya and Nariño, without known Early or Late Periods. Obviously any verification of this hypothetical chronology must await more archeological investigation.

PROBLEMS

All authorities agree that the outstanding need in Colombian archeology is more scientific archeological exploration. Not only are large regions still unexplored, but many which are represented by large collections are without any records of excavations. Other immediate needs are also apparent. A careful classification of the San Agustín stone carvings is much to be desired. Since it is possible that the San Agustín Period covered a considerable length of time, a classification of the carvings might reveal subdivisions, and thus facilitate comparisons with regions outside of Colombia. A detailed descriptive classification of Quimbaya ceramics and other artifacts is also needed. Exceptionally large collections exist, from all parts of this extensive zone. Although further excavation would be necessary to validate any classificatory subdivisions, a good basis could be laid in anticipation of such work. New excavations in the *Chibcha* zone are of paramount importance. This is the one area in which it may be possible to link the archeological and the historical records. Furthermore, this favorable environment should furnish a long record of occupation. Finally, since all of these problems seem to rest on future excavation, it is to be hoped that the archeologists will pay more attention to noncemetery sites. Today, a great majority of the specimens come from graves, and, consequently, only a partially complete picture of the cultures is presented. There is no doubt that large surface ruins are absent in large parts of Colombia, but careful investigation should reveal evidence of house sites and villages elsewhere than in the *Tairona* region.

SOURCES

The present summary of Colombian archeology is based largely on the two recent surveys by Bennett (1944 a) and Hernández de Alba (1938 a, 1941). Both of these reports describe the archeological zones of Colombia and illustrate typical specimens from each. A comprehensive bibliography of each archeological zone can be found in Bennett (1944 a), and a general bibliography on Colombian anthropology in Ortíz (1937 a). Other general sources which deal with Colombia as a whole and contain good illustrations of specimens are: Beuchat

(1918), Cuervo Márquez (1920), Joyce (1912), Saville (1924 a), Schottelius (1941 a), Seler (1893), Stübel, Reiss, Koppel, and Uhle (1889), and Thompson (1936).

Information about Colombian metallurgy may be found in most of the general sources cited above. However, several sources deal exclusively with this subject, such as : Créqui-Montfort and Rivet (1919), Hultgren (1931), Krickeberg (1931), and Rivet (1924 a, 1926 a).

There are many geographical studies of Colombia, but James (1942) is a convenient source. Besides the general sources which cover all of Colombian archeology, special reports have been written on most of the individual zones. Selected references are listed below, following a regional order.

There are many sources for the archeology of San Agustín. The following are selected because they report on excavations or present a good summary and illustrations: Hernández de Alba (1939, 1943), Lunardi (1934, 1935, 1936), Perez de Barradas (1937), Preuss (1929), to mention only the most famous of his numerous reports, Schottelius (1940), Walde-Waldegg (1937 a, 1937 b, 1940), Wavrin (1936).

So far, much of the recent Colombian work on Tierradentro remains unpublished. The best published sources are: Burg (1937–38), Hernández de Alba (1936, 1938 b), and Perez de Barradas (1937).

The general surveys are about the only sources of information for the Nariño zone. Brief notes on excavations in the area can be found in Ortíz (1937 b, 1937 c, 1938 a, 1938 b).

The Upper Cauca zone is covered by three sources which report on scientific excavations in the region: Ford (1944), Hernández de Alba (1938 a), Wassén (1936).

Although Quimbaya materials are common in museum collections, and are frequently illustrated, few specific reports have been published on this zone. Arango C. (1941) gives a chatty account of grave digging in the region. Restrepo Tirado (1929) reviews the historical references to the Quimbaya, and Uribe Piedrahita (1936) illustrates some specimens.

There are no good sources for the Sinú zone, which is still virtually unknown. Spinden (1939) gives a few notes.

Excavation reports for the *Chibcha* zone can be found in: Bolinder (1937), Hernández de Alba (1937), Schottelius (n. d.; 1941 b). Bollaert (1860) is a good traveler's account, and Restrepo (1895) is the classic historical work on the *Chibcha* on which most ethnological summaries are based. (See also pp. 887–909, this volume.)

The *Tairona* zone is one of the best known through the three detailed monographs of J. A. Mason (1931, 1936, 1939). G. Mason (1940), and Bolinder (1942) give some additional archeological notes. Oppenheim (1941) is a source for the nearby Riohacha section.

ARCHEOLOGICAL ZONES

In the pages which follow, the major archeological zones of Colombia are summarized in terms of the materials known at present. The description emphasizes the dominant style for each zone, although the other styles are also mentioned. Only brief mention is made of the important zones of San Agustín and Tierradentro since these are described in detail in the two following articles by Gregorio Hernández de Alba, which form a logical complement to the summary.

1. NARIÑO

The intermont basin, which includes the town of Pasto in the southern Colombian Department of Nariño, extends into Ecuador and is geographically similar to the series of high basins which characterize that country. The terrain is high, with gently rolling surfaces, for the most part not forest-covered. The environment of the higher lands which extend up to the snow line is of typical páramo type. In spite of the physical similarity to Ecuador, and in spite of the fact that this area is said once to have been occupied by the *Inca*, surface ruins have not been found. Up to the present, scientific exploration has been meager in this area, and so outside of the collections from excavated graves no information is available.

Graves.—The graves are of several types. The commonest has a short square shaft from which one or more small subterranean chambers are entered via window-doors. Deep-shaft graves as much as 11 m. (about 36 feet) in depth, and some simple unprepared graves are also reported. Interment was both primary direct and secondary in crude pottery urns.

Ceramics.—The Nariño style is best represented by the ceramics, which conform closely to a few basic shapes. The major categories are small, globular- or angular-bodied ollas (fig. 91, *e*) with two rim-loop handles; round-based or annular-based plates (fig. 91, *f*); globular- or angular-bodied large bowls, both with and without flaring rims; and constricted taper-collar jars. Painted decoration is typical in two-color positive of red or black on a soft yellow or white base (fig. 91, *d*), two-color negative in black and red, and, most characteristic of all, three-color negative (fig. 91, *a*, *b*) in black, white, or yellow and red. Relief, incision, and modeling are other rare design techniques. Most designs are executed in carelessly applied broad lines forming such geometric figures as bands, triangles, serrations, crosses, stars, steps, circles, and zigzags. Rarely, monkey and other animal designs occur. In spite of the relative simplicity of the shapes, designs, and colors, their combination forms a distinctive, easily identifiable style, although one suggestive of Ecuadorian affiliations.

Clay ocarinas are a Nariño characteristic. Many of these have fine step and scroll designs painted in red on a cream base. The finish is far better than on ceramic painting. Other associated clay artifacts are plain spindle whorls, whistles, spoons, and, more dubiously, figurines.

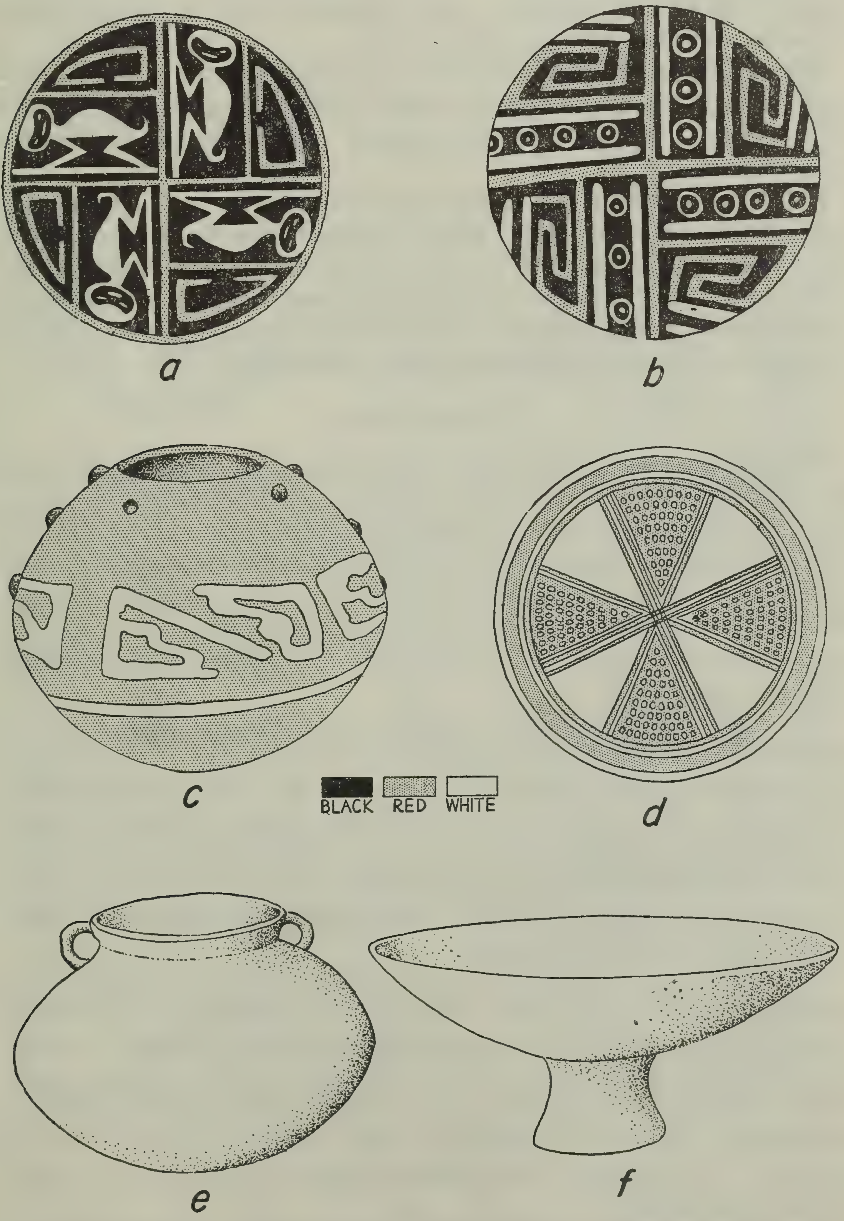


Figure 91.—Nariño pottery types. *a*, *b*, Three-color negative on inside of bowl; *c*, *d*, red-on-white designs; *e*, plain olla; *f*, annular based plate. (After Bennett, 1944, figs. 8, 9, 10.)

Stone objects.—The grave equipment includes quite a variety of stone artifacts of which small chisels and both long and short polished celts are typical. There are also straight and T-shaped axes, beads, pounders, and grindstones. The only carved stones associated are small stone statues, less than half a meter (18 in.) in length, which have simple faces and short relief arms.

Metal objects.—Fabricated gold objects demonstrate certain metallurgical skills, such as drawing of wire, casting of animal figures, and hammering of simple disks and plaques. Copper beads and rattles were also made.

Only rare pieces in the many local Nariño collections do not conform to this standard style. Across the mountains to the east, in the Department of Putumayo, a different type of material has been reported, but so far remains undescribed in detail. Further excavations are needed in the Nariño region to reveal new varieties of materials and to furnish a basis for any archeological chronology.

2. UPPER CAUCA

The designation "Upper Cauca" is applied to the wide Cauca River flats and the adjacent mountain sections, which lie roughly between the towns of Cartago and Popayán, in the Departments of Cauca and Valle del Cauca. The modern town of Cali is the focal center of this area. There is no archeological evidence that the grass-covered Cauca flats were occupied to any extent in pre-Spanish times, but numerous small sites are situated on the hilly slopes and in the small mountain valleys on each side.

The Upper Cauca differs from the other archeological zones of Colombia in that it is not dominated by a single style. Considering the central location, one might expect to find influences from the Quimbaya region to the north, the Nariño region to the south, and the Tierradentro region to the southeast. Certain of these influences do occur, but the archeological picture is complicated by the presence of at least six distinctive styles, with little or no information about their chronological arrangement.

Like so many other sections of Colombia, there is little elaboration of surface ruins in this area. Small house platforms are scattered irregularly around the mountain slopes and along the ridges. Graves are either located next to the house sites, or in loosely arranged cemeteries. Today, the Cauca flats are utilized for commercial agriculture and grazing, but on the mountain slopes the old milpa pattern still persists. The six major archeological styles or complexes are briefly enumerated below.

The Río Pichindé complex is encountered in the mountains west of Cali. Typical graves have square shafts, about 6 feet (2 m.) deep, with an oval chamber opening off one side (fig. 92, *a*). Both primary

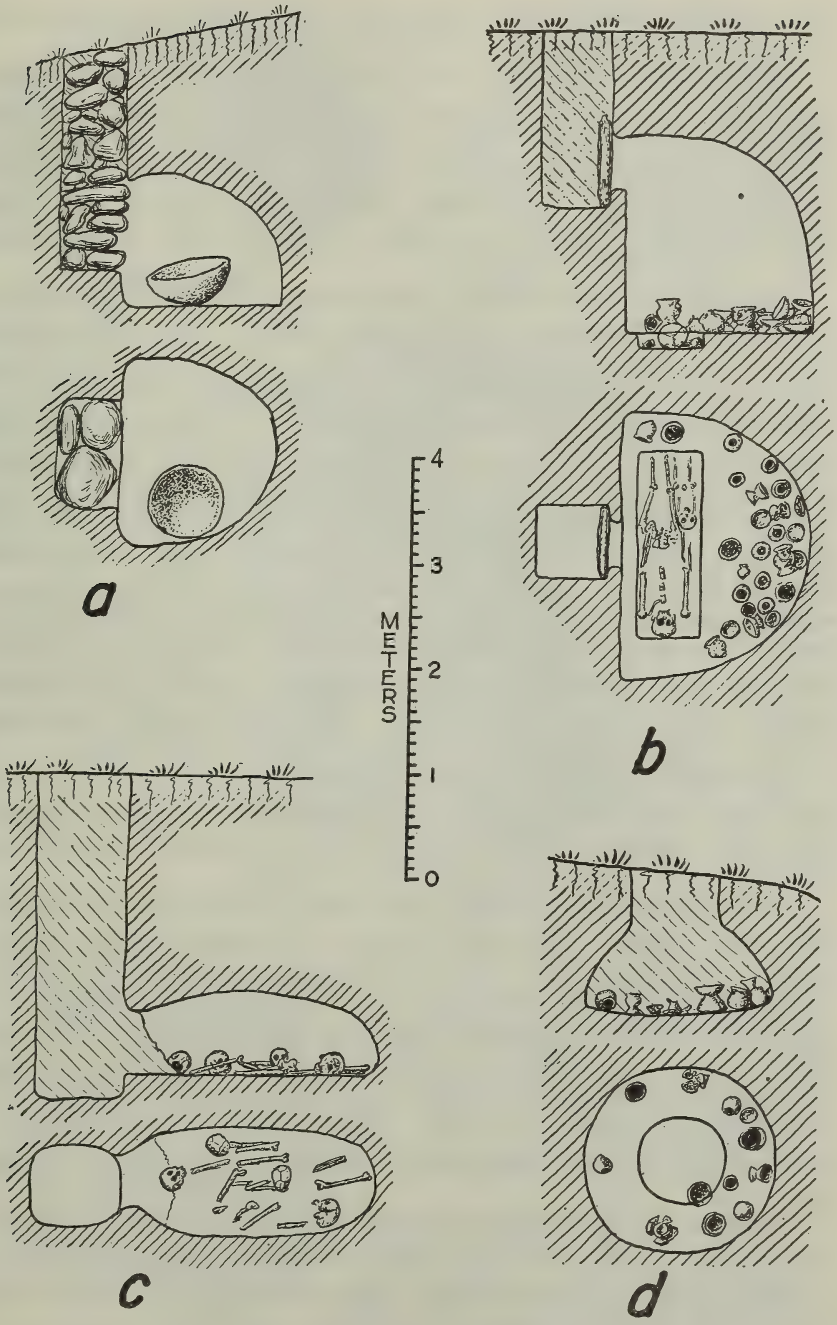


FIGURE 92.—Upper Cauca tomb types. From the following sites and proveniences: *a*, Valle 10-Tomb C; *b*, Cauca 2-Tomb B; *c*, Cauca 6-Tomb C; *d*, Cauca 10-Tomb D. (After Ford, 1944.)

and secondary burials are encountered in the graves, but ceramic accompaniment is rare except for a few large, plain ollas.

The Río Bolo complex is one of the styles found in the Central Cordillera east of Cali. The graves have both round and square shafts, from 6 to 23 feet (2 to 7 m.) deep, with oval chambers (fig. 92, *c*). The major ceramic shapes are squat, pedestal-based vessels, and globular bowls with outflare or bulging rims. Small vertical handles are added to some vessels as ornaments. Otherwise the decoration is limited to slip and some incision.

The Quebrada Seca complex is also found in the Central Cordillera, occasionally overlapping the Río Bolo section. The graves either have short, square shafts, 6 feet (2 m.) deep, with arched chambers entered through windowlike doors, or are bell-shaped with a shaft entrance directly above the chamber (fig. 92, *b*, *d*). As many as 200 pots may be found in a single grave (pl. 169, *top*), and most of the vessels were apparently manufactured especially for burial purposes. Nonetheless, the ceramic shapes are limited to such forms as open bowls, pedestal jars, constricted-mouth vessels with pointed bases, and globular ollas (pl. 169, *bottom;* fig. 93). The characteristic techniques of decoration are partial red slip, appliquéd faces and hands, and some incision. Some of the crude, pointed-base jars are scored with deep cuts around the base. The absence of positive or negative painting, and relief or modeled decoration is noteworthy. Plain clay spindle whorls are common, and twisted gold nose plugs are the only metalwork.

True Quimbaya materials are encountered in the northern part of the Upper Cauca region. The style is represented by typical shapes, three-color negative designs, and such accompanying artifacts as decorated roller stamps and incised clay whorls.

The two remaining styles are both called "Calima" by the Colombian archeologists. The first is found in rectangular shaft graves, some 19 feet (6 m.) deep. The ceramics are covered with a red slip and painted in fine-line, white, geometric designs. The vessel shapes are described as angular-bodied, flare-rimmed, and as tall and tubular. A few clay stamps, whorls, and gold nose plugs are associated. The second "Calima" style is located in graves 16 feet (5 m.) deep, with oblique shafts bowed on one side. The most distinctive vessel has a constricted neck and three handles, asymmetrically placed on the body.

Although still other isolated ceramic types have been found in the Upper Cauca region, none is of typical Nariño or Tierradentro style. Further detail for these additional types may be found in the Archeology of the Popayán Region, this volume, page 861.

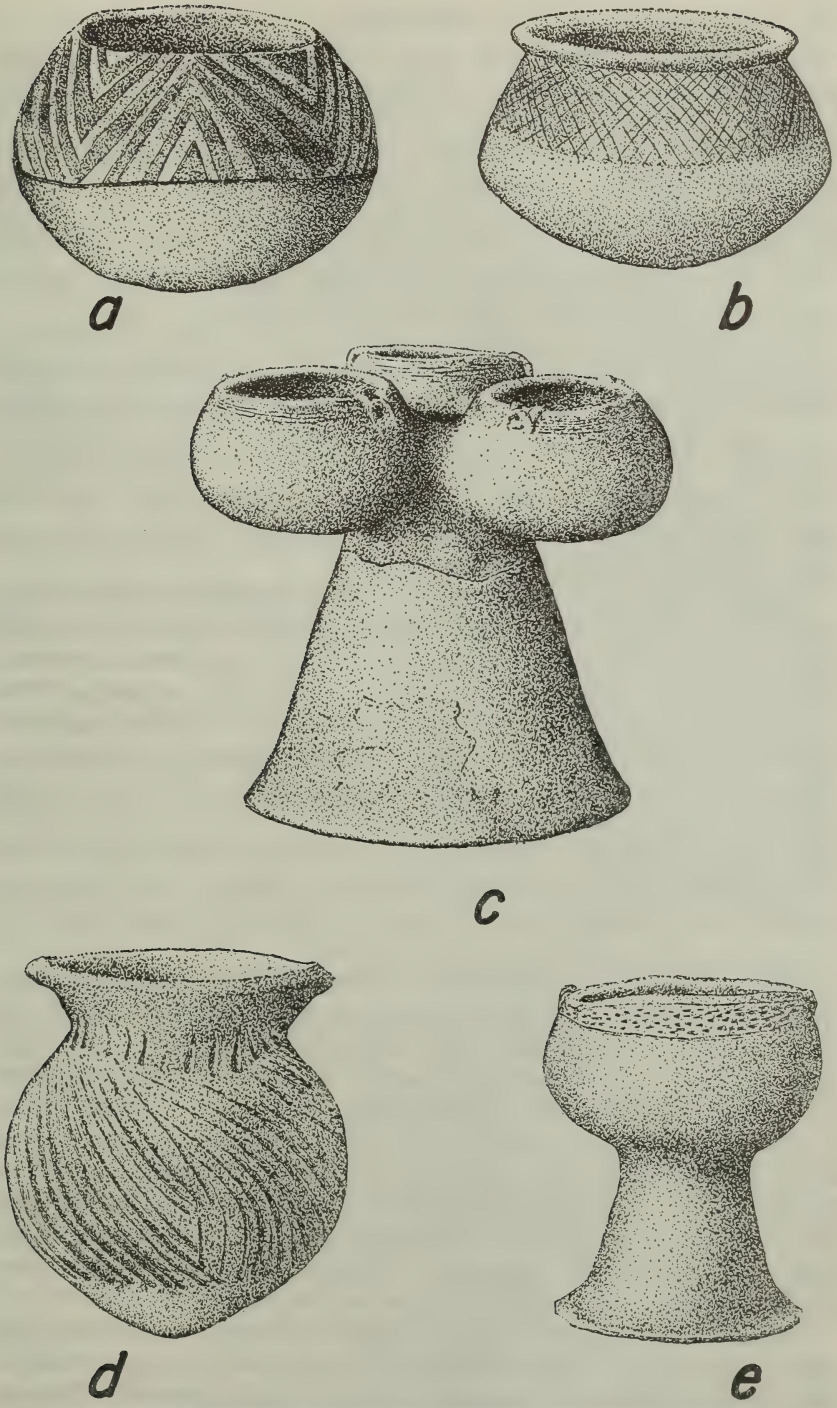


FIGURE 93.—Upper Cauca pottery types. (After Ford, 1944.)

3. QUIMBAYA

The central Cauca Valley in the Departments of Caldas and Antioquia is no longer marked by extensive river flats, but rather by rolling hills between the river and the flanking mountains. This section of the Cauca and the nearby Quindío Valley are designated as the Quimbaya archeological zone. Some authors wish to consider the Quindío as a distinct subdivision, but the archeological materials do not confirm this. Although the Quimbaya area is densely populated today, there is little evidence of any such density in the past, in spite of the rather sizable collections of antiquities.

The Quimbaya style dominates the region; in fact, it is the only one that has yet been isolated. Quimbaya is outstanding in variety and skill of goldwork and in distinctive ceramics. All of these materials come from the graves which have been extensively, if not scientifically, excavated. Stone constructions, habitation sites, mounds, and other surface ruins have not been encountered. One author refers to stone coffins and covers, but generally speaking, neither statues nor other carvings are known for this culture.

Graves.—Most graves are variants of the shaft-and-chamber type. The shafts are both square and round and range from about 3 to 32 feet (1 to 10 m.) in depth, and there are even some reports of 80-foot (25 m.) depths. Some shafts are said to contain cut out steps. The chambers are described as square, oval, or round in floor plan with arched or gable-type roofs. There are unconfirmed descriptions of Tierradentro style chambers with supporting central columns and geometric painted designs. Rarely, the graves were simple pits, or pits lined with stones. Many types of burials have been attributed to the Quimbaya, including flexed, extended, multiple, urn, cremated, primary, and secondary with red paint. Commonly, large quantities of ceramics and gold objects were placed in the graves.

Metal objects.—Goldworking is an outstanding characteristic of Quimbaya (pl. 170). Little silver was available and pure copper was rare, so that metallurgy was largely limited to pure gold or a combination of gold and copper called tumbaga. The metallurgical techniques are numerous. Gold was melted, forged, and cast in molds. Some of this is solid casting, some hollow of the "cire perdue" type. Some of the goldwork, although probably cast, has the appearance of wire filigree. Gold was also hammered flat, or decorated with repoussé design by hammering over a relief-carved stone. A soldering technique was commonly employed. Different qualities of gold were combined in the same object as a decorative device.

The collections present a great variety of objects. There are nose rings of triangular, half-moon, round, and elongated shapes. Hollow jars, bottles, idols, and vases are both plain and decorated. Among the many ornaments are breastplates, diadems, pendants, rectangular and round hollow bells, bracelets, solid and hollow beads, and many kinds of pins. Gold tweezers served for depilatory purposes. The large hammered masks were possibly intended for faces of mummy bundles. Solid gold scepters have the heads decorated with cast bird, human, and animal forms. There are both solid and hollow figurines. Some of the objects are made of several pieces; for example, half-moon disks are pierced and attached as bangles on large figurines. This skill in metallurgy is unmatched in Colombia, and many authors have concluded that the Quimbaya region was a primary center for the development of goldworking techniques in the Americas.

Ceramics.—Hundreds of examples of Quimbaya ceramics are represented in the public and private collections. In spite of considerable detailed variation, particularly in shape, no satisfactory subdivisions of this style have yet been established.

One group of vessels is interesting because of the so-called Peruvian influences in the shapes and in the modeling. This group, however, cannot be isolated clearly from the remainder of the collections, and must be considered a variant within the Quimbaya style rather than trade pieces. Not only do the pieces present many features in common with other vessels of local manufacture, but even the elements of Peruvian influence are generalized rather than specific. Many of the double jars are included in this category. These have a modeled container representing a human figure, an animal, or a bird (fig. 94, *g*), connected by a short tube and a bridge to a plain container. Some are true whistling jars. Double-spout vessels with flat connecting bridges are similar to some Peruvian pieces both in shape and in modeling, but many of these also have mammiform tripod or tetrapod legs, which is a distinctive local characteristic. There are likewise a few stirrup-spout vessels, although their resemblance to the Peruvian type is slight.

A series of incised and polished brown ware vessels present another distinctive style (pl. 172, *d*), but again there is no evidence that it can be isolated from the other Quimbaya material. The typical shapes are globular ollas, double open bowls, and, most characteristic of all, tall cylindrical urns. The ware is thick, highly polished, and ornamented with geometric incised designs.

The remaining Quimbaya vessels can be summarized in terms of a few basic shapes, although there is considerable variation within these categories. Open bowls may be subdivided on the basis of convex, straight, and flaring sides. Some are carinated, some have diamond-shaped orifices, and flaring pedestal bases. Tall-shoulder jars form another broad category, with great variation in the type of collar, even including some with modeled faces. Many vessels can be loosely classified as ollas. Some of these, as well as other vessels, have handles, although they are not very common. There are also

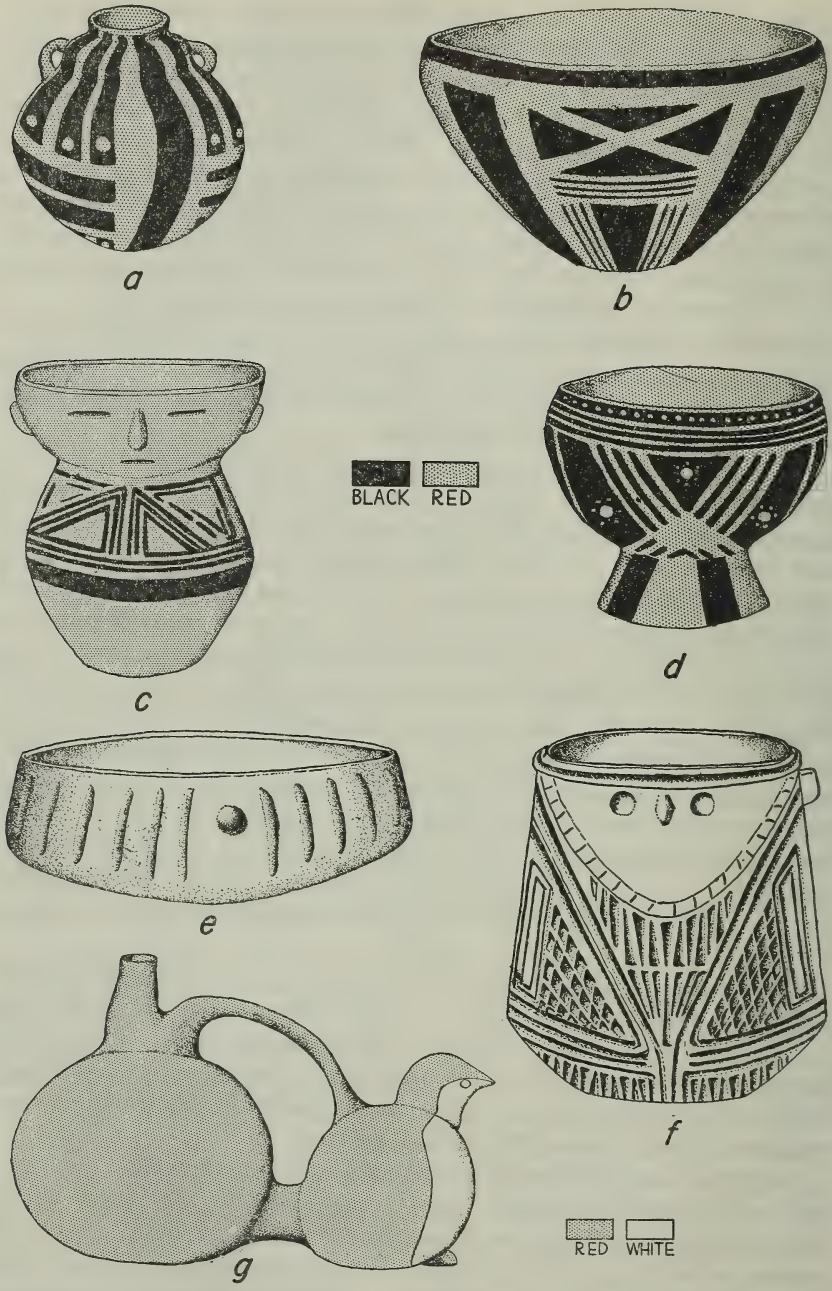

a
b
BLACK
RED
c
d
e
f
RED
WHITE
g

FIGURE 94.—Quimbaya pottery types. *a–d,* Two-color negative; *e,* relief design; *f,* champlevé design; *g,* double-jar with red and white design. (After Bennett, 1944, figs. 12, 13, 14, 15.)

figurine jars which resemble in many respects the true figurines (pl. 171, *b*). These include figures with crossed legs, with stub legs, seated on a bench (pl. 171, *a*), and a few in which only the face is represented on the jar.

The graves contain many monochrome vessels, but for the most part only decorated pieces have been selected for the display collections. Positive painting generally employs only two colors, white and red (fig. 94, *g*), although, rarely, black may be added. Both two- and three-color negative painting is typical of Quimbaya, again utilizing black and red, or black, white, and red (fig. 94, *a-d*; pl. 171, *b*). Other design techniques are the modeling, already mentioned in the discussion of Peruvian influences, some relief work, particularly face collars, incision, and cut-out or champlevé (fig. 94, *f*). Except for the modeling, practically all design, irrespective of technique, is geometric. Bands, triangles, parallel lines, cross-hatch, circles and dots, are the more frequent elements. The design application is somewhat careless even though small units are applied.

Clay figurines are typical of Quimbaya. The three major categories are standing figures, those seated with the feet out, and those seated with the knees drawn up. They are usually painted in two-color or three-color negative designs.

Clay spindle whorls are numerous in the Quimbaya collections. This is the only evidence for spinning and weaving since no cloth specimens are preserved. The majority of the whorls are conical or double-conical in shape, and some have projecting nubbins. Many are incised or decorated with punctations, frequently filled with white paint. Clay stamps with cut-out relief, for decorating cloth, or perhaps for body designs, are also characteristic (pl. 171, *d*). Some are in the form of hollow or solid cylinders. Others are flat, rectangular stamps with conical handles.

Stonework.—Quite a variety of stone work is found in the graves, including polished stone celts, T-shaped axes, stone beads, and many grindstones. Except for a few small plaques, presumably for decorating gold objects, stone carving is absent.

4. SINÚ

The region of the Sinú River, in the Department of Bolívar, is little known archeologically, but the few pieces which are said to have come from that section are quite distinctive. Most of this country is tropical, and consequently excavation is difficult. The early Spaniards reported the discovery of high earthen mounds, and mentioned cremation burials. They were also impressed by the quality of the goldwork, and in fact, most specimens which have been attributed to the Sinú culture are of a quality comparable to the Quimbaya.

The few pieces of Sinú ceramics present a distinctive style. Complete pieces represent ollas or open bowls, generally thick, sand tempered, and, with the exception of one black-white-red vessel, without painted designs. A tall broken vessel may well have been part of an urn cover. The characteristic decoration is high-relief modeling and incision. The male and female figures are modeled with amazing skill, in contrast to most Colombian workmanship (pl. 171, *g*). The males are depicted in the nude, but the upper part of the body has incised designs, suggestive of body painting or tattooing. The females are represented as wearing large earplugs, collars, and short skirts, secured at the waist with a belt. Again, the upper body has incised designs.

The Sinú area is not comparable to other Colombian divisions because both information and materials are still so rare. However, the distinctiveness of the few known pieces suggests that some day the Sinú region will take its place as one of the major archeological zones.

5. CHIBCHA

The *Chibcha* occupied the large intermont basins of the Eastern Cordillera in the Departments of Cundinamarca and Boyacá, centered roughly around the contemporary towns of Bogotá and Tunja. These high basins, averaging about 7,000 feet (about 2,135 m.) above sea level, have extensive areas of well-watered, fertile, and relatively flat lands. It is the one region in Colombia which has the basic requirements for the maintenance of a concentrated, sedentary, agricultural population, and for the development of the Andean culture pattern.

The *Chibcha* are best known from the Spanish historical accounts. (See this volume, p. 887.) Relatively little scientific archeological work has been done, with the result that few good *Chibcha* sites are known, and evidence for any great antiquity in this favorable area is lacking.

Architecture.—Large village sites have not been discovered, in spite of the fact that they should exist even though the *Chibcha* did most of their building with perishable materials. There are some reports of house foundations marked by rings of stone columns. Near Tunja, these are said to be up to about 160 feet (50 m.) in circumference, but those recently excavated by the Colombian archeologists are much smaller. One ring is about 12 feet (3.8 m.) in diameter, with seven stone columns still in position; another is somewhat larger and has eight uprights. The excavators found hard-packed clay floors covered with refuse, some 32 inches (80 cm.) below the present ground surface. Within the circle of stone columns was another circle of post holes and, in the middle, the hole for the center pole was revealed.

Graves.—*Chibcha* cemeteries contain direct burials, some with and some without stone slab covers. Dry caves in the region were also utilized for burials. In one cave, cremated burials under inverted bowls were found at a level slightly below that of the classical *Chibcha*. The direct burials are either extended or flexed, and mummy bundles are found in the drier caves.

Gold objects.—The *Chibcha* worked in gold (pl. 172, *top*, *left*), and tumbaga, although in general with less skill than the Quimbaya. Most of the standard techniques were known, however, including solid and hollow (cire perdue) casting, filigree, gold-plate, and gold leaf. Strips were decorated with repoussé designs by hammering over relief-carved stone. Characteristic of *Chibcha* are flat cast figurines with the features and other details executed in gold wire. Idols, birds, and animals in both solid and hollow casting are also common. Diadems are cut out from thin gold, and bangles are attached. Crowns are made in the same fashion. The scepters are made of twisted wire and topped with modeled bird figures. The most elaborate objects represent scenes, composed of cut-out figures arranged on flat platforms.

Textiles.—In some of the dry caves, pieces of cotton cloth have been preserved. These are parts of large rectangular mantles and are decorated with elaborate geometric painted designs. Some of the designs are so regular that they must have been applied with roller stamps.

Ceramics.—*Chibcha* ceramics are limited in variety and not very well made. Certainly, they represent no great artistic expression. There are four major shape categories: A short-collar jar has a globular body and one or two rim-to-body handles. Tall-collar jars include some with and some without single flat rim-to-body handles. The collars may be plain, but more commonly they are decorated with relief or painted faces and figures (pl. 172, *b*). Pedestal bowls (pl. 172, *c*) and ollas are the two remaining common shapes. Less frequent shapes in the collections are double bowls, shoe-shaped vessels, open bowls with basket handles, treasure jars and covers, and shoulder jars.

Most of the ceramic peices are monochrome. Some, however, are painted in red on an orange, buff, or a white base. Others are decorated by incision, punch, appliqué, and rarely by modeling. Design elements are geometrical with the exception of a few stylized animal and human figures. The commonest geometric elements are parallel lines, dots, checkers, concentric circles, triangles, scrolls, and crosshatch.

Both figurine vases (pl. 172, *a*) and hollow figurines are found, representing seated figures, standing figures, and figures seated on benches. The figurines are usually decorated with incised designs.

Other typical clay artifacts are modeled animals, incised whorls, effigy ocarinas, pipes, and cylindrical and flat carved stamps.

Stonework.—Petroglyphs and rock paintings are numerous in the *Chibcha* region, but stone statues or other major carvings do not occur. Stone artifacts are abundant and fall into such standard categories as notched axes, polished celts, grindstones, relief blocks for gold embossing, carved amulets, and both incised and painted spindle whorls.

Miscellaneous objects.—Rarely wooden artifacts, such as stools, lances, and spear throwers are preserved in the dry caves.

It is evident that far more work is necessary before a satisfactory picture of *Chibcha* archeology can be given, or the true importance of *Chibcha* cultural development and antiquity can be judged.

6. TAIRONA

The isolated mountain range of the Sierra Nevada de Santa Marta is located in the northeast corner of Colombia in the Department of Magdalena. The lower slopes of these snow-capped mountains are covered with heavy forest growth, which merges gradually with the tropical jungle. Along the Caribbean coast, however, there is less precipitation, and in some places desert conditions prevail.

This is the region once dominated by the *Tairona* culture. Extensive exploration has discovered over 40 sites distributed over a wide range from the dry Coast to the wet forest mountain slopes. The *Tairona* zone is distinguished from the rest of Colombia by the quantity of surface ruins. The ruins represent quite large, concentrated villages in which much of the construction work is of stone.

Architecture.—Above-ground stone construction is the outstanding characteristic of *Tairona*. Split and selected stonework is the most common, but in some of the better-constructed ring houses, vaults, and tombs, carefully dressed and fitted blocks are employed. The major types of stone construction units can be described briefly.

The stone-lined, ring house platforms are from about 16 to 65 feet (5 to 20 m.) in diameter. The ring is formed of a double or triple row of stones, in a circle. The inner row is composed of curved dressed slabs set on edge around the circle. The outer row is of wedge-shaped slabs laid horizontally so as to form a platform around the inner wall. Such houses have two entrances, usually made of dressed slabs arranged in steps leading to an interior threshold stone. A layer of habitation refuse covers the floor of these houses and shows that they were used as dwellings. However, some of them also contain graves, burial vaults, and caches of ceremonial objects, which suggest a certain religious significance as well as utilitarian.

Terraced platforms for dwellings are cut out of the slopes and faced with rough stone walls. Burial mounds are lined with stones, and large rectangular courts are outlined with earthwork walls. Within the village, long slab stairways and paved roads, as much as 16 feet (5 m.) in width, connect the various units. Stone-slab bridges cross small streams, and sunken stone-lined pits served as reservoirs. Upright stone pillars and tables made of boulders set on smaller stones are also found. None of these construction units is isolated, but rather, a number of ring houses, mounds, roads, stairways, bridges, reservoirs, and the like form a single village site.

Graves.—The *Tairona* culture is represented by several types of graves. Secondary urn burial is common. Urns are of three major types and are usually covered with inverted bowls. Primary extended burials occur in the same cemeteries. There are likewise stone-lined box graves, and burial vaults built up of dressed-stone blocks. Shaft-and-chamber graves have been found near the Coast, but their identification as *Tairona* is dubious.

Ceramics.—Pottery is abundant, both in the refuse sites and in the graves. Although a number of substyles are recognized, there is no basis for their chronological arrangement. Two major wares dominate the ceramics: a thick red ware and a thin black ware.

The thick red ware (fig. 95, *c*, *e*, *f*; 96, *a*, *c*) is typically decorated with appliquéd animal and human figures. The major shapes are shallow plates, sieves, trays, some with basketry handles, shoe-shaped vessels, ollas, many with annular bases, carinated bowls, open bowls with annular bases, and cylindrical jars.

The thin black ware (figs. 95, *a*, *b*, *d*, *g;* 96, *d;* 97) is on the whole better made than the red ware, and also better decorated with fine-line incision and naturalistic modeled relief. The shapes are more varied, and include annular-based ollas, bowls, and cups, many of which have shoulders. This ware is also represented by double orifice bowls, tetrapod vessels, modeled effigy figures with stirrup spouts, and collar jars with tetrapod feet and single spouts.

The characteristic "treasure jars" are tall cylindrical vessels with fitted clay covers (fig. 96, *b*). These jars are not only made in red ware and black ware, but some are decorated with painted designs, a rarity in *Tairona* culture. The painting consists of curvilinear designs in red or brown on a buff base.

Many other clay artifacts are encountered. There are many miniature vessels, of both red and black ware, small pestles, rattles, and carved cylindrical stamps. Ocarinas, whistles, and small modeled effigies represent both animal and human forms, and are executed with great skill and care. It is interesting to note that spindle whorls have not been found.

Stone objects.—The stone artifacts are both utilitarian and ceremonial. In the utilitarian group are metates, manos, mortars, pestles, pierced stones for weights, polishing stones, and the like. The

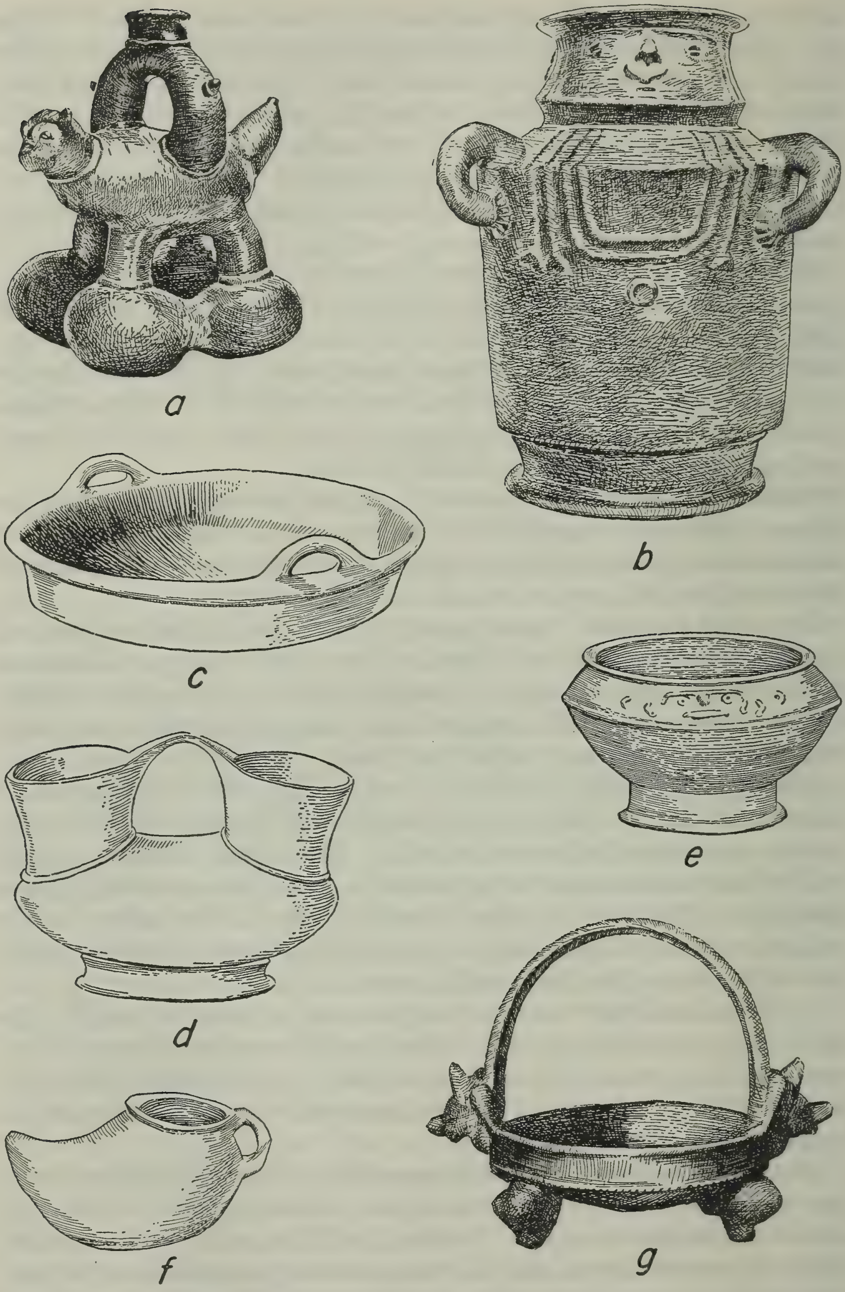


Figure 95.—*Tairona* ceramic types. *a*, *b*, *d*, *g*, Black ware; *c*, *e*, *f*, red ware (After Mason, 1939.)

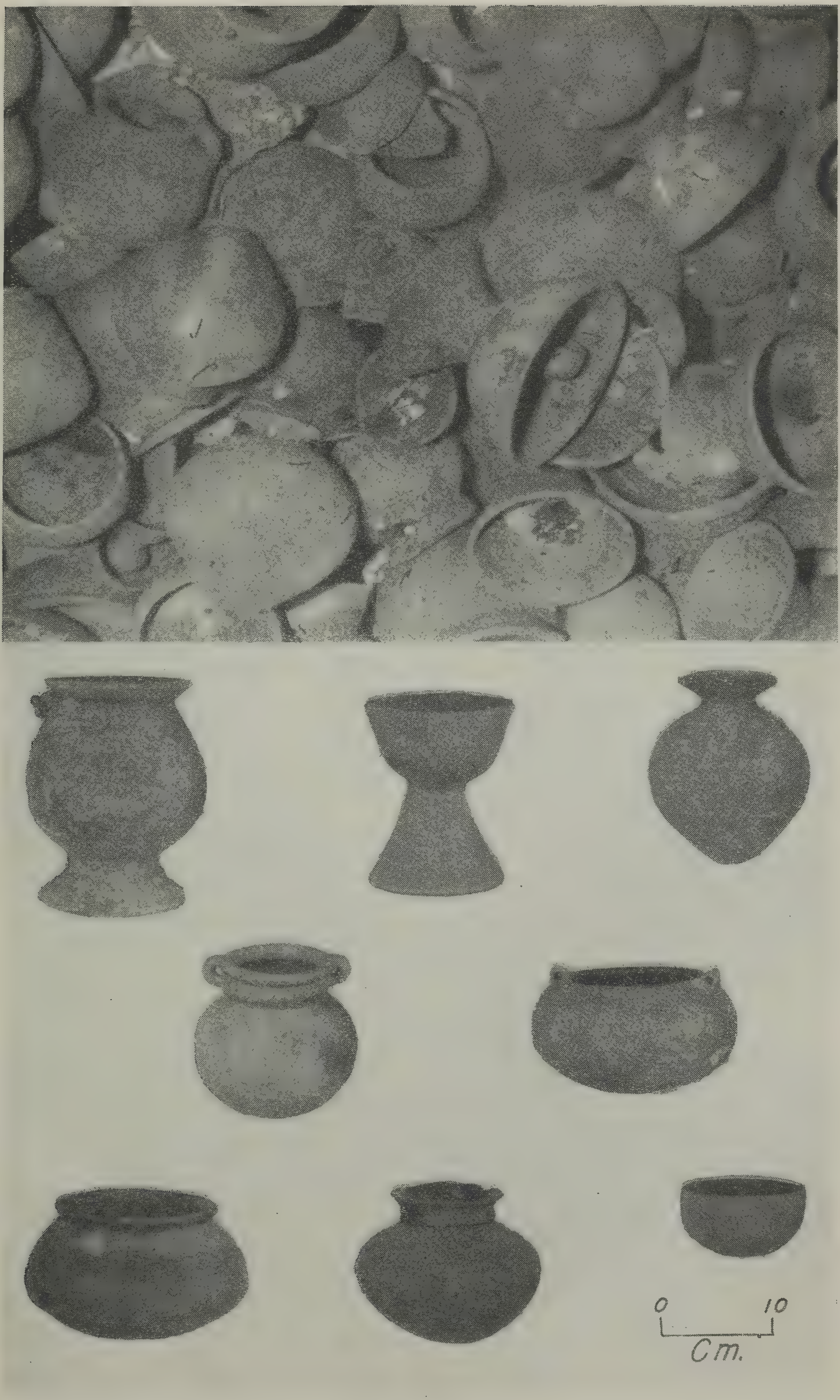


PLATE 169.—**Upper Cauca River pottery.** *Top:* Flashlight photograph of ceramics in situ in a shaft grave at Quebrada Seca. (After Bennett, 1944, pl. 7.) *Bottom:* Selection of Quebrada Seca vessels. (After Ford, 1944, pls. 2, 3, 4.)

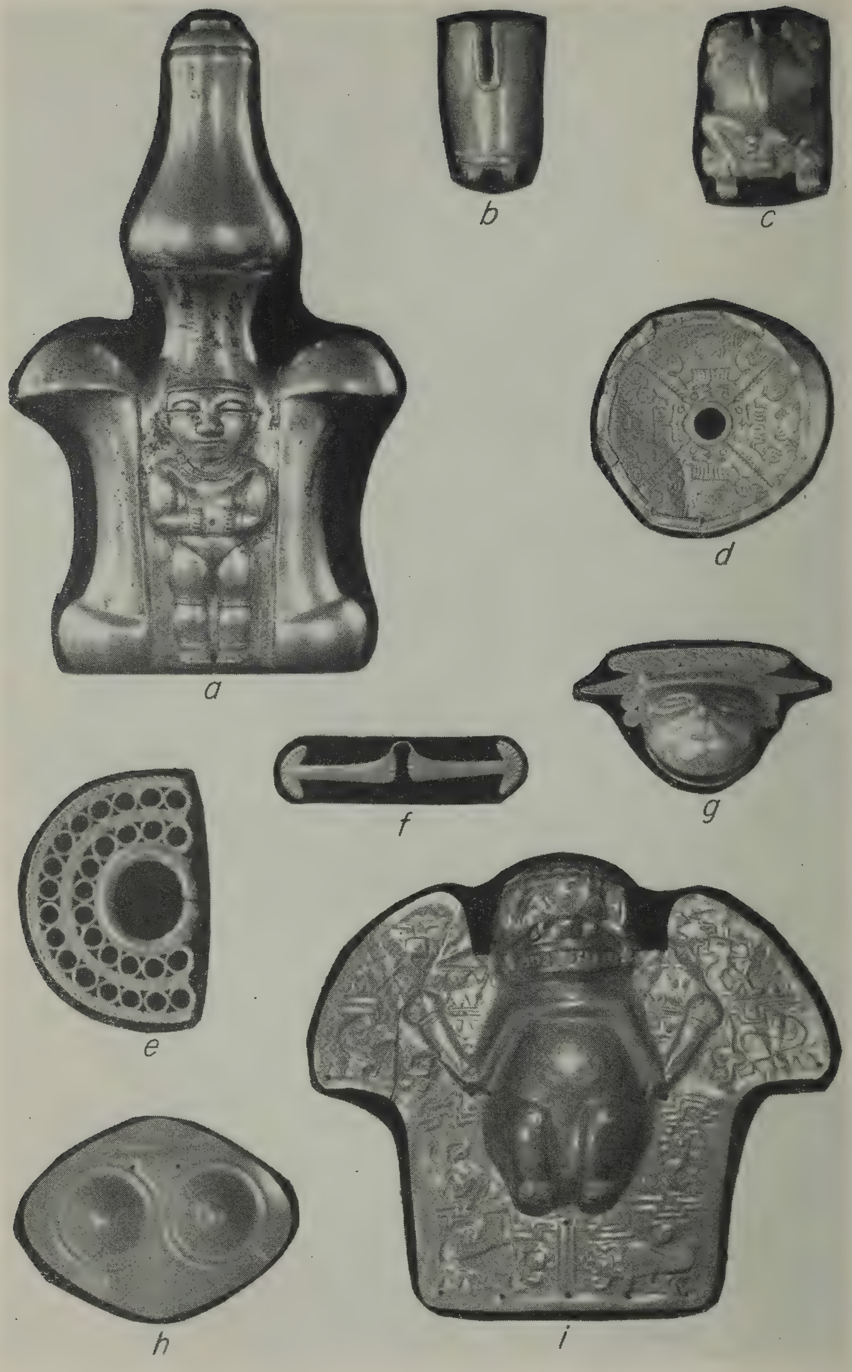


PLATE 170.—**Quimbaya gold objects.** *a*, Hollow vase; *b*, staff head; *c*, effigy pendant; *d*, decorated ear plug; *e*, filagree nose ornament; *f*, nose ornament; *g*, hollow cast head; *h*, *i*, hammered breastplates. (After Bennett, 1944, pls. 8, 9.)

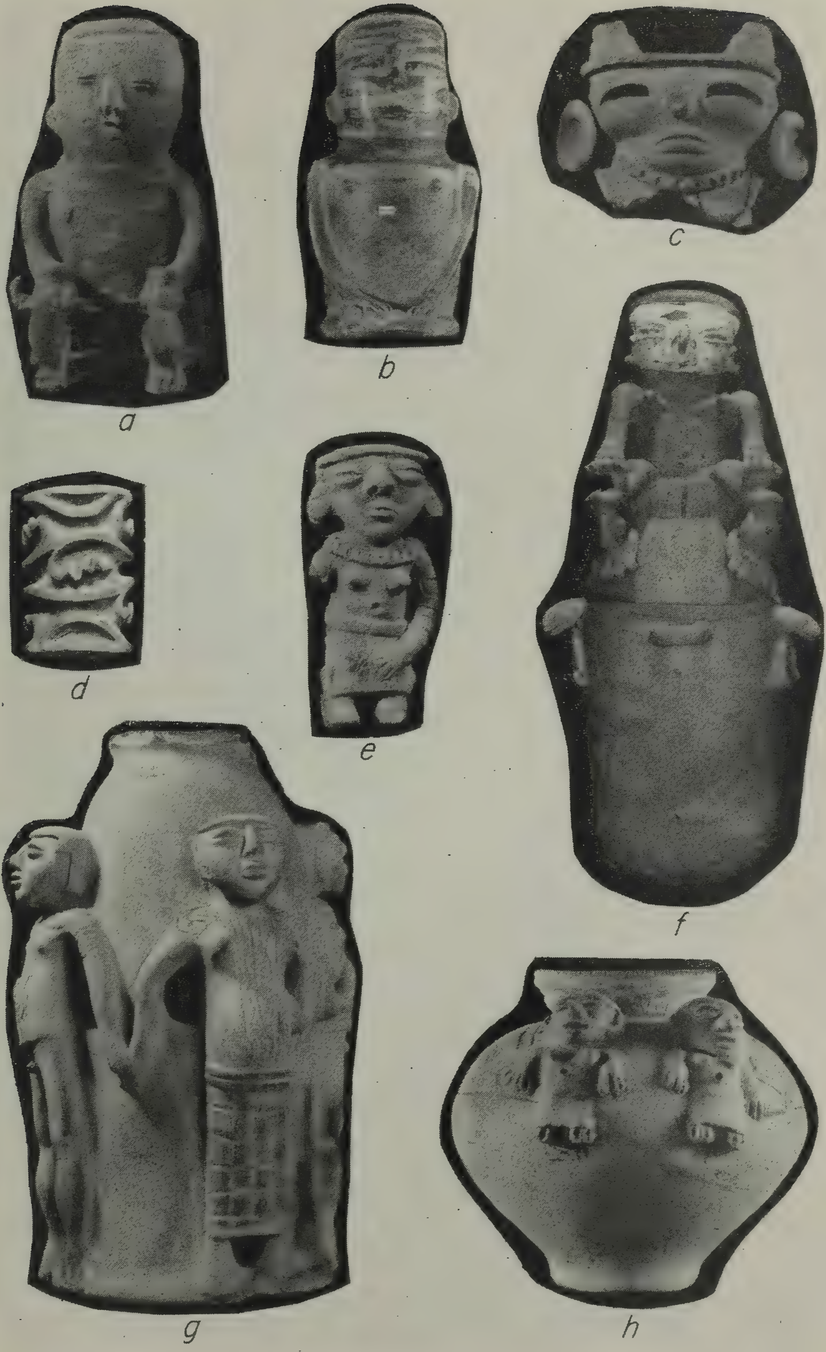


PLATE 171.—**Quimbaya, Sinú, and Mosquito ceramics.** *a*, Figurine vase with figure seated on bench (Quimbaya); *b*, seated figurine vase with negative design (Quimbaya); *c*, modeled head adorno (Sinú?); *d*, cylindrical clay stamp (Quimbaya); *e*, modeled figurine adorno (Sinú); *f*, urn with effigy cover (Mosquito); *g*, pedestal base with modeled figures (Sinú); *h*, plain ware bowl with adornos (Sinú). (**After Bennett, 1944, pls. 10, 11, 12.**)

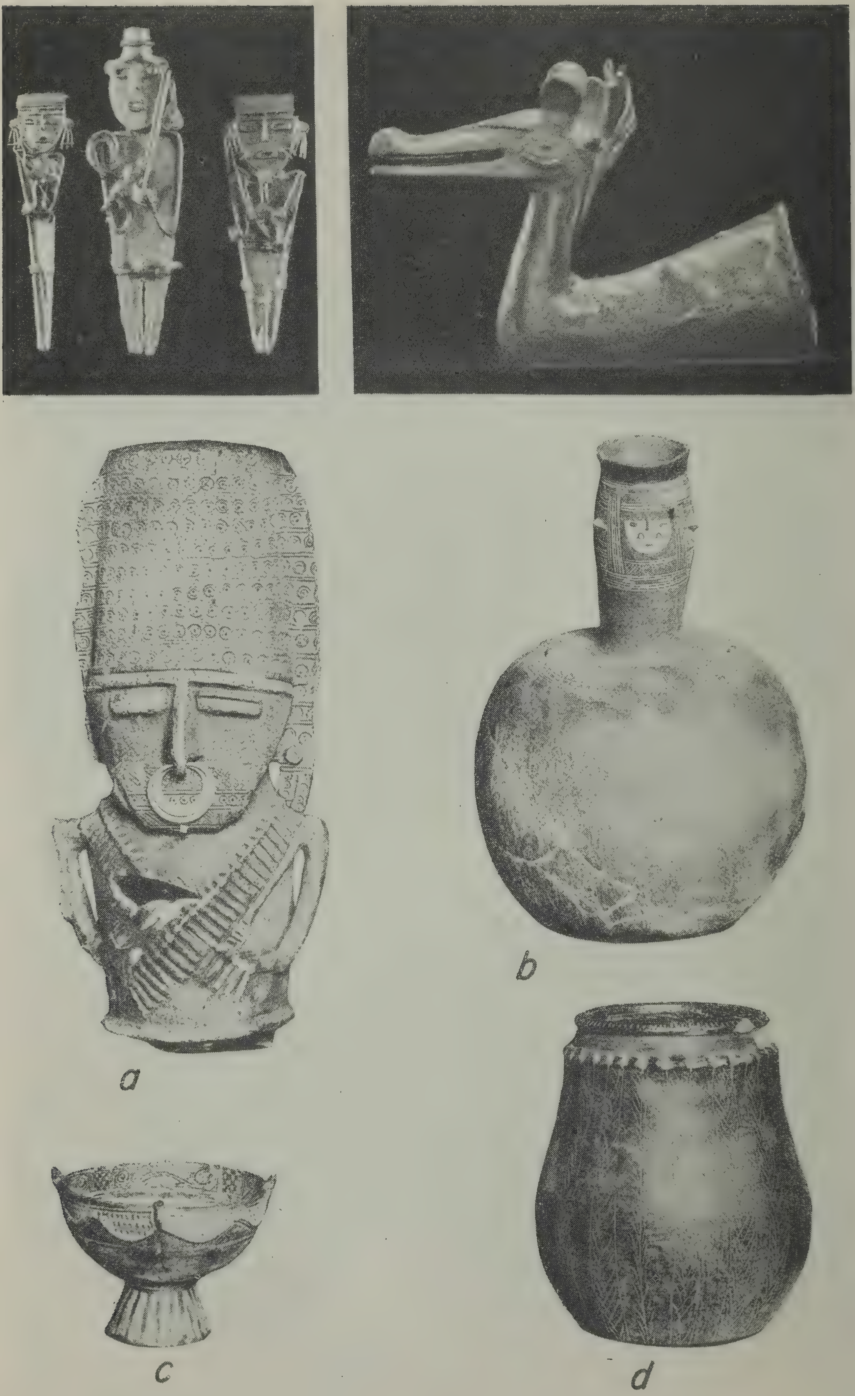


Plate 172.—**Chibcha and other artifacts.** *Top (left): Chibcha* gold ornaments. *Top (right):* Gold deer head, a staff or throwing-stick head from the confluence of Cauca and Niche Rivers, Colombia. (Courtesy American Museum of Natural History.) *Bottom: a-c, Chibcha* pottery; *d*, Quimbaya Brown incised ware. (After Seler, 1893, pls. 49, 50, 52, 56.)

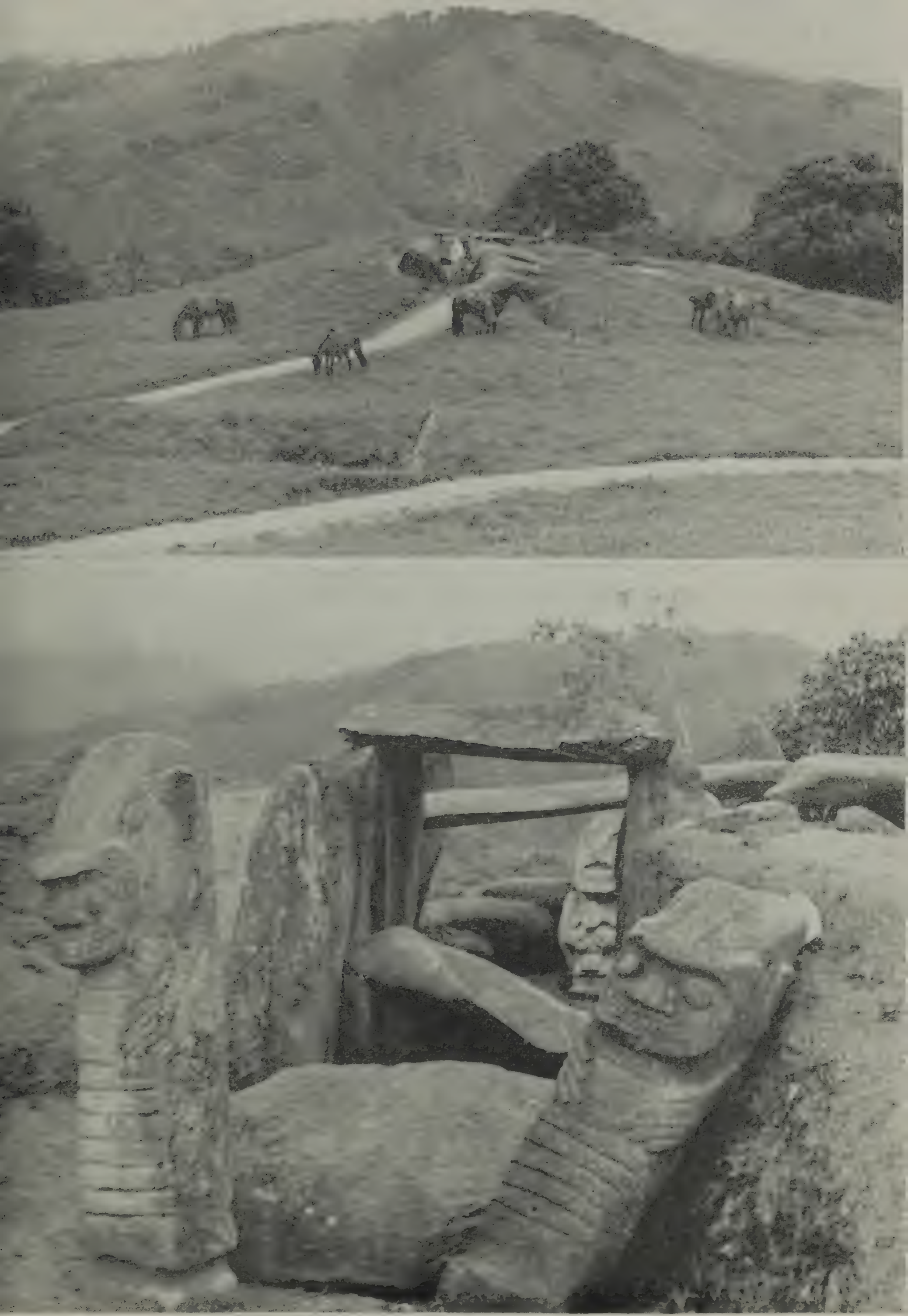


Plate 173.—**A mound and temple at San Agustín.** (After Bennett, 1944, pl. 1.)

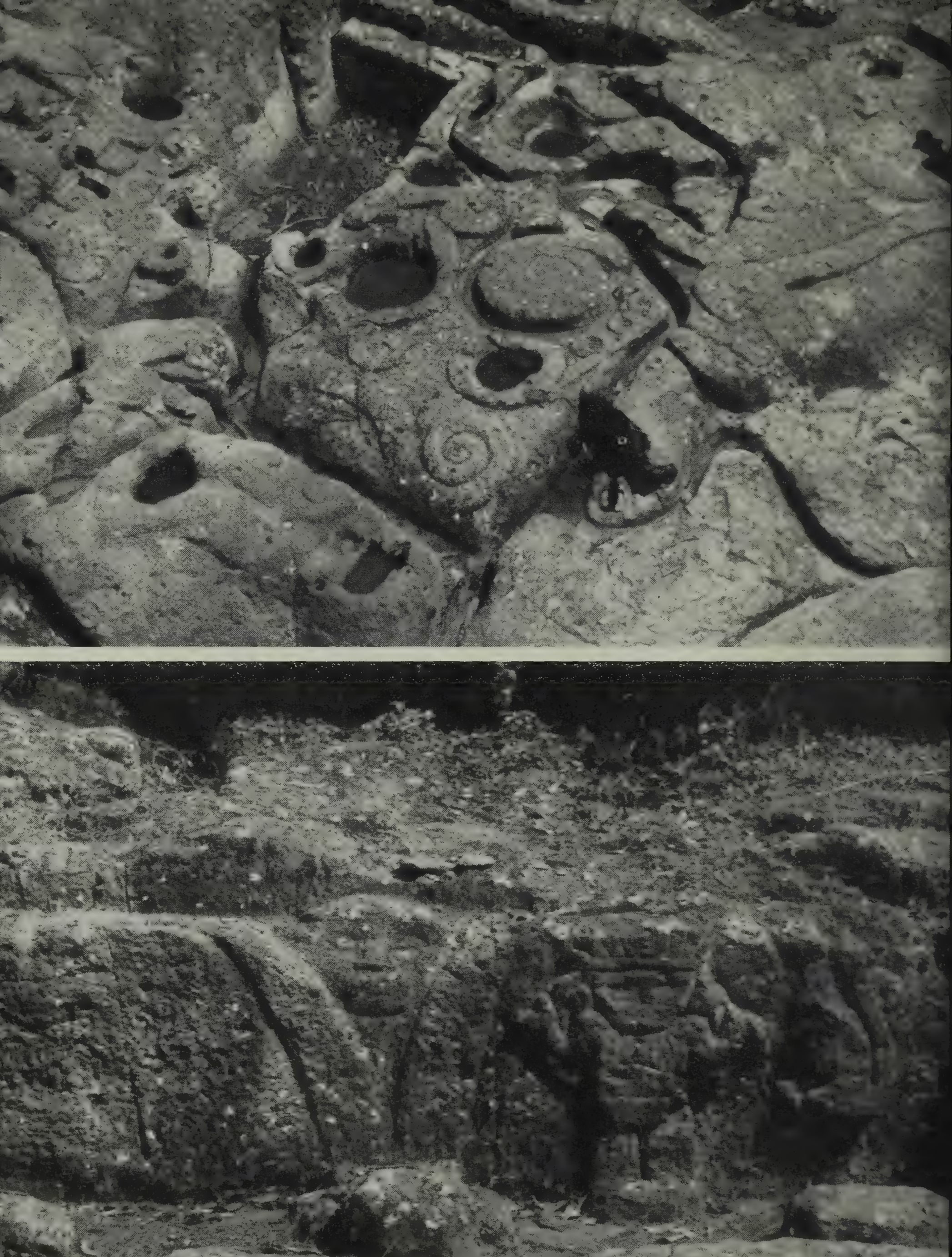


Plate 174.—**A carved stream bed at Lavapatas, San Agustín.** (After Bennett, 1944, pl. 2.)

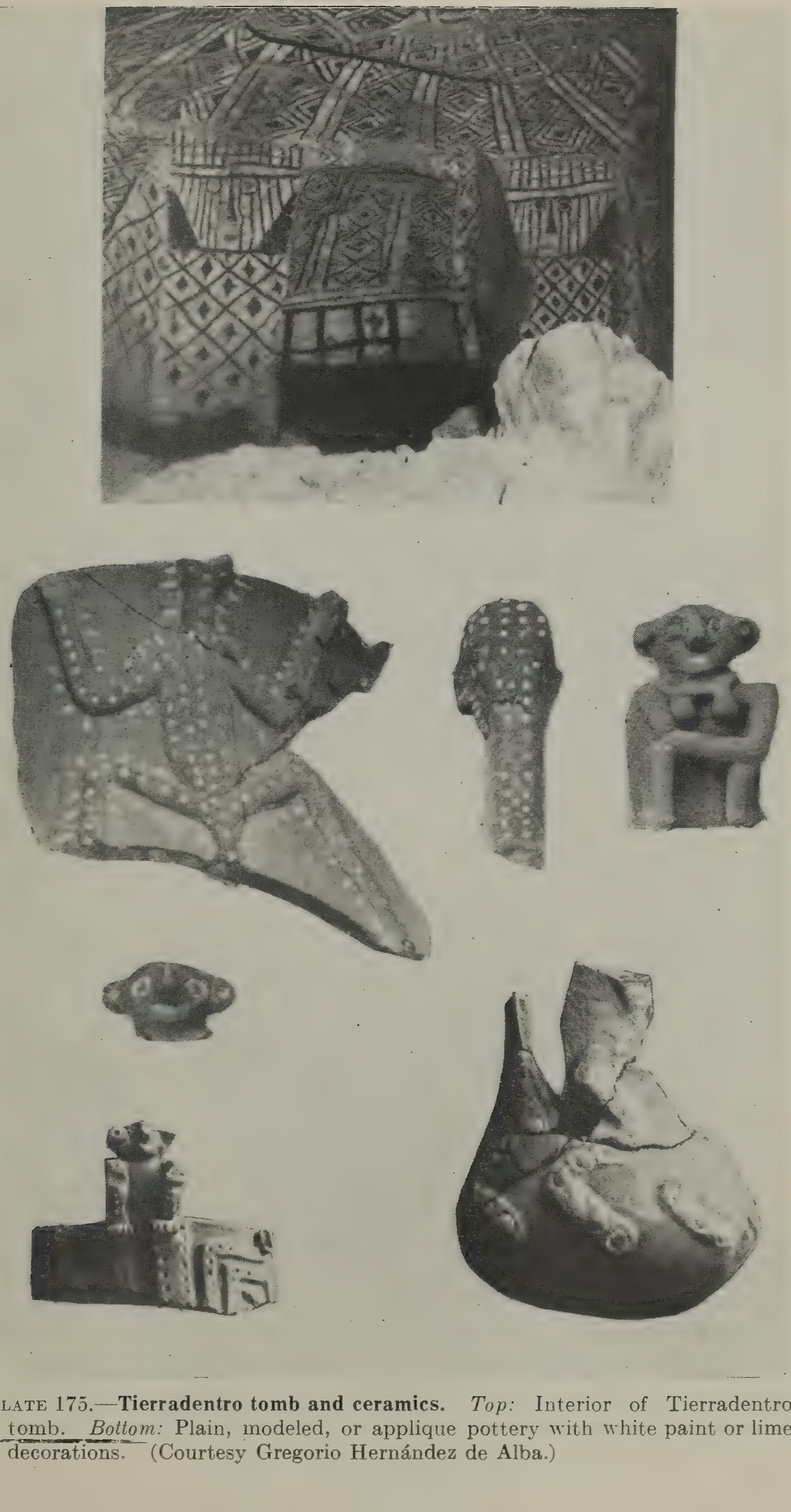


Plate 175.—**Tierradentro tomb and ceramics.** *Top:* Interior of Tierradentro tomb. *Bottom:* Plain, modeled, or applique pottery with white paint or lime decorations. (Courtesy Gregorio Hernández de Alba.)

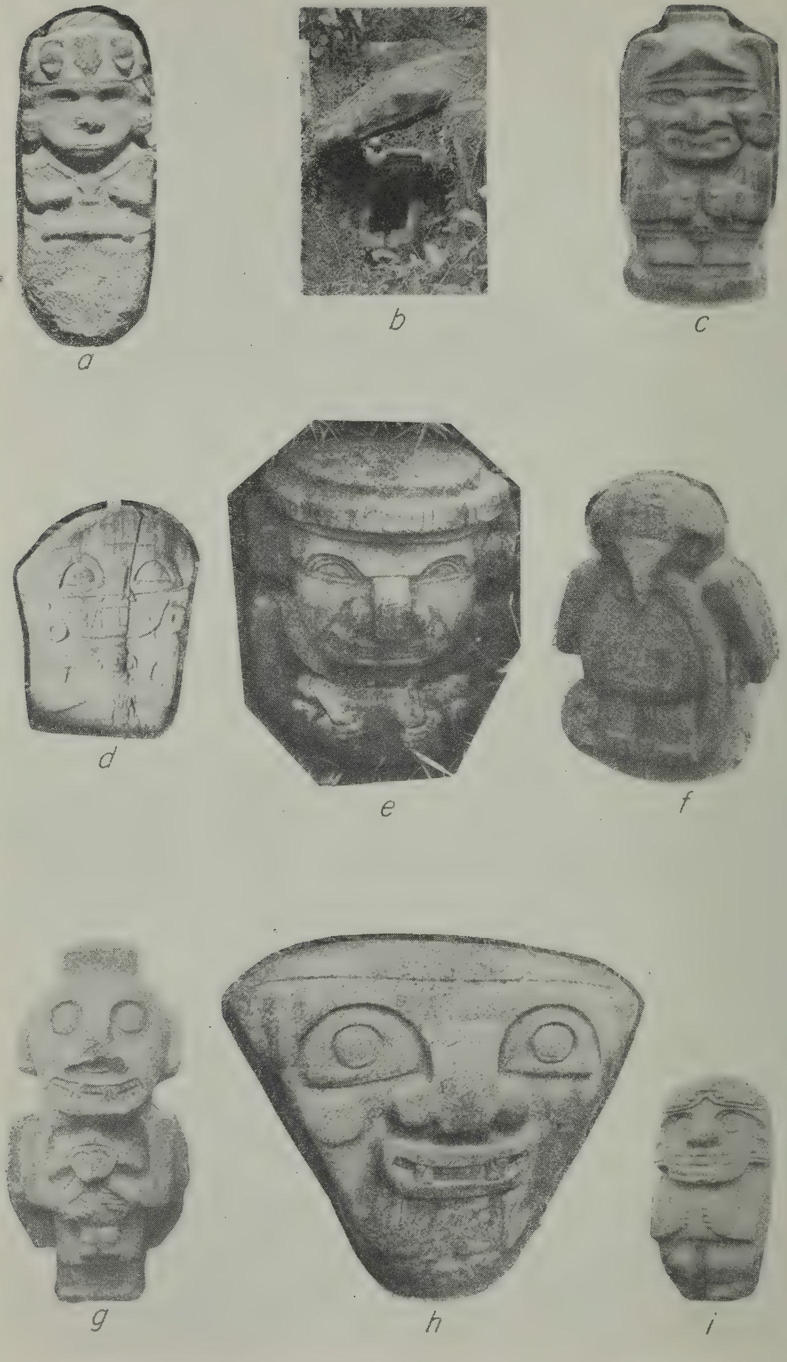


PLATE 176.—**San Agustín stone carving.** *a*, Small statue in National Park Museum, San Agustín; *b*, Monolithic sarcophagus from region of Isnos; *c*, Typical statue at Meseta B, San Agustín; *d*, Small statue in National Park Museum, San Agustín; *e*, San Agustín statue in situ; *f*, *h*, Statues at Meseta B, San Agustín; *g*, *i*, San Agustín statues. (*b*, *g*, *i*, Courtesy Gregorio Hernández de Alba; all others after Bennett, 1944, pls. 4 and 5.)

ceremonial objects are well-made polished axes, batons with geometric incised designs, broad-winged pendants, animal amulets, small carved tables with four legs, and beads of many kinds, including the long cylindrical type. Some of the objects are made of polished jade.

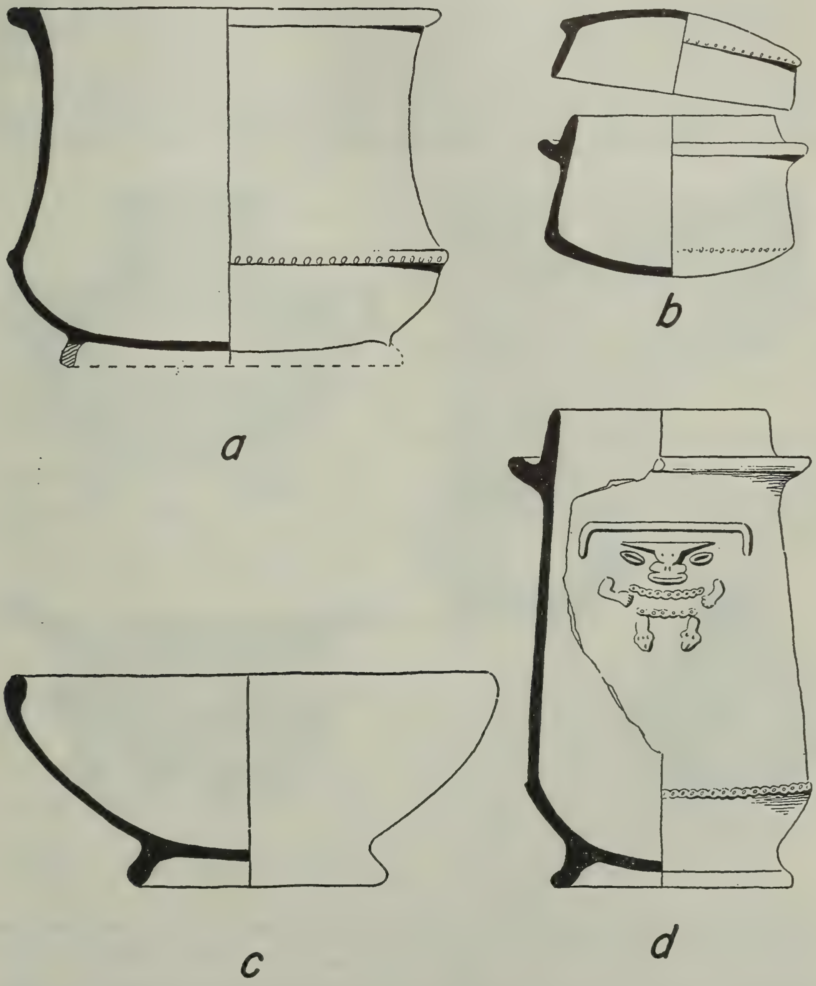


Figure 96.—*Tairona* ceramic types. *a, c,* Red ware; *b,* treasure jar and cover; *d,* black ware. (After Mason, 1939.)

Bone, shell, and metal objects.—Some bonework and shellwork is preserved. Incised tubes and carved staff heads are typical of the bonework. Shell is represented by beads, figurines, pendants, and, especially, carved crocodile heads. Beads, rings, plaques, pendants, bells, buttons, and other objects are made of gold, copper, and tumbaga. The techniques include solid and hollow casting, soldering, welding, the use of wire, and decoration with repoussé.

7. SAN AGUSTÍN

The San Agustín zone surrounds a small pueblo of the same name near the headwaters of the Magdalena River in the southern part of the Department of Huila. The country is one of rolling hills and some sharper peaks, all forest-covered but with rich soil. The region is well watered, with many small streams, closed in by coarse vegetation. There are no outstanding intermont basins, nor is there evidence of any large concentrated population in the past. Archeologically, the designation San Agustín does not refer to any one outstanding ruin, or groups of ruins, but rather to a series of more or less isolated small sites which conform in general to the same style. Many large stone statues have been found around this area, and, consequently, it has long drawn the attention of amateurs and professionals alike. With the possible exception of Santa Marta, San Agustín is the best-known archeological region in Colombia. In spite of the amount of work done, however, and some excellent reports on the outstanding remains, little attention has been paid to the ceramics or to archeological materials which do not pertain to the San Agustín style.

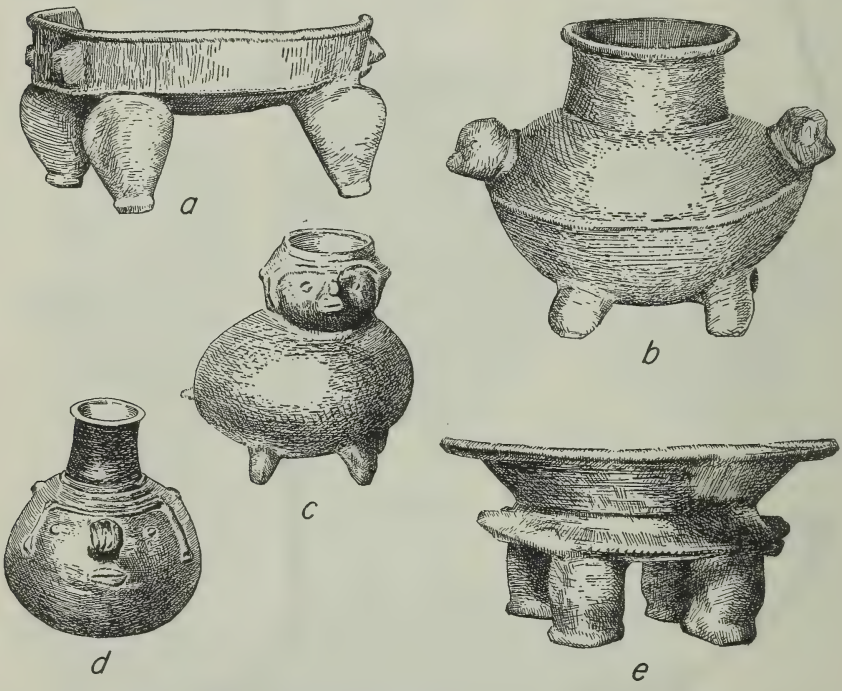


FIGURE 97.—*Tairona* black ware ceramic types. (After Mason, 1939.)

There are numerous monuments attributed to the San Agustín culture. These include earthen mounds, stone-lined and covered temples and shrines, subterranean stone-lined galleries, rough stone surface walls, various types of tombs, and a great variety of stone carvings, particularly statues. Most of the construction appears to be of a religious or ceremonial nature, and little is known about the habitation sites.

Detailed descriptions of the construction work, stone carving, artifacts, and other characteristics of San Agustín are given in the following article on the Archeology of San Agustín and Tierradentro in this volume (p. 851) and, consequently, are omitted here.

Although the San Agustín materials dominate this zone, fragments of the distinctive Matanzas style of ceramics have been found in mound-refuse sites. These are characterized by painted designs in dull red on a light background, of such simple patterns as parallel lines, chevrons, and triangles. The only shapes suggested are open bowls, and squat tripod vessels. Clay figurines, rare or absent in San Agustín, are not uncommon in the Matanzas sites.

San Agustín style statues and ceramics have been found in the adjacent Tierradentro region, but elsewhere in Colombia stone carving does not occur at all. In all probability, San Agustín represents an early culture, but as yet there is no definitive archeological proof of its exact chronological position.

8. TIERRADENTRO

The Tierradentro zone lies between the upper Cauca and Magdalena Rivers, in the northwest corner of the Department of Cauca. The environment is generally similar to that of San Agustín, although the country is somewhat more sharply dissected by the numerous mountain streams. Relatively little flat land is available, so that cultivation in the past, as today, probably consisted of small patches cleared on the mountain sides.

The proximity of this region to San Agustín makes it a logical place to search for traces of that culture. Actually, such materials have been found in relative abundance. There are carved boulders and numerous stone statues, but these do not present all the variations of form encountered in the home region. In general, the stone carvings appear to be simpler, although no careful comparison of the styles in the two areas has yet been made. The stone-lined box-type tombs containing San Agustín types of ceramics are also found in Tierradentro. Despite a few minor differences, a description of these San Agustín vessels would be repetitious. Not all of the characteristic San Agustín features are found, however, since there are no reports of mounds, large stone-lined temples, or shrines. Some authors refer to this Tierradentro-San Agustín style as "Epigonal," implying that it is a later manifestation. However, in spite of the marginal geographic position of Tierradentro, there is as yet no convincing evidence for the chronological relationship of the two San Agustín substyles.

The designation "Tierradentro style" (or "Cauca culture") refers to a distinctive culture characterized above all by elaborate, subterranean, painted tombs, excavated directly in the soft rock of the region. These seem to have been used only for burial purposes. Fragmentary ceramics are found in the entrance shafts and on the floors of these chambers, and represent styles as yet unknown elsewhere in Colombia. The ceramics are characterized by relief bands with deep incised lines and punctations filled with a white paste. Plain black ware, black-on-red painted ware, and other minor variants are also encountered. Although most of the ceramics are fragmentary, true refuse or habitation sites have not yet been identified.

Again, the detailed description of Tierradentro style is included in the following article by Hernández de Alba (pp. 856–859). The fact that San Agustín, Tierradentro, and rare Quimbaya and miscellaneous types are all found in this one zone should ultimately make a good chronology possible. However, a convincing sequence has not yet been established.

MISCELLANEOUS

Some authors recognize still other archeological zones in Colombia, and, of these, at least brief mention should be made of the Mosquito Style. This is represented almost exclusively by large cylindrical urns, with fitted covers on which seated human figures are modeled (pl. 171, *f*). The urns have been found only at a few sites in the southern part of the Department of Magdalena, between the river of the same name and the town of Ocaña.

The urns are from 20 to 24 inches (50 to 60 cm.) in height. They are without preserved painted decoration, but have two or more ornamental lugs below the shoulder. Seated effigy figures of males or females are modeled on the urn covers. The heads are slightly rectangular in shape, with the features in high appliqué relief. Leg ligatures are clearly represented around the ankles and below the knee joints. These suggest Amazonian influence, and in fact, the ultimate affiliation of the Mosquito style is probably with the Colombian tropics rather than the Highlands.

BIBLIOGRAPHY

For bibliography, see page 830.

THE ARCHEOLOGY OF SAN AGUSTÍN AND TIERRADENTRO, COLOMBIA[1]

By Gregorio Hernández de Alba

SAN AGUSTÍN

Several centuries prior to the Spanish Conquest, an ancient and characteristically Andean civilization called San Agustín, after a village of the Department of Huila, flourished in the southwest of the Republic of Colombia in certain parts of the Departments of Huila and Cauca (map 1, *No. 19;* map 8). Here, about 1797, Francisco José de Caldas, a scholar of New Granada, studied "great numbers of statues, columns, temples, tables, and an image of the sun, all of stone and in disproportionate shapes" (Caldas, 1942, 4:42). These ruins, which represented a heretofore unknown culture, were subsequently studied more thoroughly by Agustín Codazzi (1863) in 1857, Carlos Cuervo Márquez (1920) in 1892, Konrad Th. Preuss (1931) in 1914, and by the Colombian Ministry of Education during the year 1937.

The distribution of the San Agustín culture has been considerably extended by the recent investigations to include the area of Tierradentro in the Department of Cauca, the region north of San Agustín, and the foothills of the Central Cordillera. Since 1936, characteristic statues and ceramics were also discovered in the zones of Moscopán and Platavieja, which lie between San Agustín and Tierradentro.

STONE SCULPTURE

The stone sculpture which is the most characteristic feature of the San Agustín culture is fairly common, more than 300 examples of carved reliefs and statues being known (pl. 176). These may be grouped, according to degree of their complexity, into the following classes: (1) Simple scratchings on rock, which differ from petroglyphs found elsewhere in America. These carvings are lightly scratched, not chiseled on the stone, and occur in grottoes, such as that at the source of the Cháquira River in Isnos, or on flat stones of the kind used for shrines and tombs. They appear to date from the same period as the sculptures, which have also been found in shrines. (2) Bas-reliefs, in which the human form is represented with the arms raised upward, the hands extended, and the feet turned out showing the five toes, are found especially on natural rocks. This class also includes such animal figures as frogs, monkeys, and large quadrupeds, like those at Alto del Tablón above the Magdalena River. Other examples are found on isolated boulders near the Tablón River. (3) Some stones, which are worked almost to a cylindrical shape, and bear a lightly engraved human face or a face and arms—one extended and the other folded over the body with the fingers outstretched—may represent the beginning of three-dimensional sculpture. (4) A large number of statues with well-developed carving in the round, accurate lines, and use of various planes, forms a class which is characterized by large canine teeth, a secondary figure ("alter ego") on top of the head of the creature represented, and some very realistic figures, such as warriors. All the statues show great movement. This is the classic type of San Agustín sculpture. (5) Certain statues of a type found especially in Alto de las Piedras, toward Saladoblanco and Moscopán, form a group characterized by extraordinary realism and a complete mastery of the art of carving. These seem more modern but show decadence in that the fantastic details of the classic type are lost. There is no stone sculpture in San Agustín that can be identified with any later periods.

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[1] These two cultures correspond to zones 7 and 8 in the preceding résumé of Colombian archeology.

The human body is represented both realistically and conventionally. Specimens of the latter have large canine teeth like the jaguar's, and often a mask ending in a trunk or a rectangular space, in which the eyes and mouth are hardly a slit or hollow. The head, which rises directly from the shoulders, is invariably large, and the limbs are in low relief. Body ornament includes abbreviated loincloths, skirts, penis cords, necklaces, ear disks, bracelets, and leg bands. Often a secondary figure or face is found on top of the head, and a trophy head hangs over the breast or a waving ribbon falls from the mouth, ending in a small head. Head ornaments include: bands, wreaths, caps, and hats. The figures commonly hold some object in the hands, such as a bat, ball, hammer, or staff. The basic design techniques are relief, champlevé, and incision. Polychrome painting (black, white, red, and yellow) is still visible on some pieces of these sculptures.

Toward the northeast and in the mountainous region of Moscopán as well as in Tierradentro are statues which have many of the characteristics of the San Agustín sculptures but differ from them in lacking the large mouths with protruding canine teeth and in having noses with narrower bases.

These carved stone figures apparently served a number of functions. Many of the animal and human figures were utilized as grave markers, since excavation below them has encountered the tombs. Others actually served as the tomb covers. In the temples, statues were used as caryatids, and others, to judge by their location in the central position of the construction, represented the principal gods. Many other statues found in and around these temples may have depicted minor deities.

Still another type of stone carving occurs on the rock underlying stream beds which has been cut out for baths or fountains, possibly for ritual purposes (pl. 174). The Moyitas spring is a good example. Here the stream bed has canals and small circular hollows to distribute and collect the water, as well as a human head carved in relief. The most elaborate example of such carving is found in the Lavapatas stream, which has various well-planned ducts that distribute the water and form small cascades which fall simultaneously into three small pools, two of which have carvings on their sides. Snakes, lizards, and tadpoles are represented, all with their heads bent toward some canal in the attitude of drinking. The ornamentation is completed with human figures or faces, quadrupeds, and a monkey, and the upper part of the rock is carved to form a seat or footstool with two sculptured legs.

ARCHITECTURE

In contrast to the excellent stone sculpture, architecture is little developed. No habitations constructed of stone have been found, which leads to the conclusion that dwellings were probably of wood or rubble with thatched roofs. Any traces of such perishable structures are difficult to identify because of the high humidity of the region and the heavy forest cover. However, there are stone tombs and temples or shrines in which statues were kept.

The temples are the largest unit constructions. They are rectangular in ground plan, measuring as much as 10 by 14½ feet (3 by 4.5 m.) and may be roofed over with a single thick slab, held in position by built-up walls, columns, and caryatids. The floors are hard packed but unpaved, and slope down toward the center where the principal statue or idol is located. Some of the temple walls are painted in geometric designs. The whole construction is covered by a mound of heaped-up earth (pl. 173). The larger mounds are as much as 25 m. (about 83 feet) in diameter and cover more than one temple. Some of the stone slabs and columns used in the constructions show signs of having been dressed, but most of the building stone is only split and selected. The small stone shelters which cover stone statues are generally called "shrines." There are also a few subterranean galleries, lined and covered with large stone slabs.

The tombs were rectangular boxes, constructed of stones embedded vertically in the ground and covered with flat slabs. Some of these tombs contain monolithic sarcophagae with carved covers (pl. 176, *b*).

However, only direct, primary burial is suggested by the disintegrated skeletal remains. Both the shrines and tombs were painted on the interior to conceal the imperfections of the stones and the irregularity of their alignment. Only in one tomb so far discovered has the top of the wall been brought to an even height by means of small stones laid on top of the large vertical slabs.

STONE IMPLEMENTS

In addition to polished stone axes, there are numerous tools cut from andesite and similar hard rock, such as points, cleavers, knives, scrapers, and axes. These must have been the tools of the sculptors, judging by their large numbers. Likewise, technical studies of the carving show traces of the use of such tools. Also associated with these are stone mortars or low metates, rectangular and slightly hollowed, and elongated stone pestles. In Tierradentro, polished stone tools are more abundant. One type of ax has a cutting edge broader than the tip; another has lateral projections for handles. Standard San Agustín style cleavers, gravers, chisels, and carved axes are also found, but the mortars are elliptical and circular as well as rectangular in shape, and some have sculptured feet. The pestles are long and ovoid in form, some thick and others almost flat.

CERAMICS

San Agustín ceramics are distinctive in spite of the relatively limited number of shapes and the meagerness of the decorations. The vessels are predominantly of brown and pinkish clays tempered with sand. The most frequent shapes are: large ollas with globular or angular bodies, characterized by great rim variation including fold-in, fold-over, and out-flare; small ollas with similar rim variation; constricted orifice bowls with sharply angular bodies; shallow plates; deep dishes with concave sides and rounded bases (fig. 98); cups; tri-

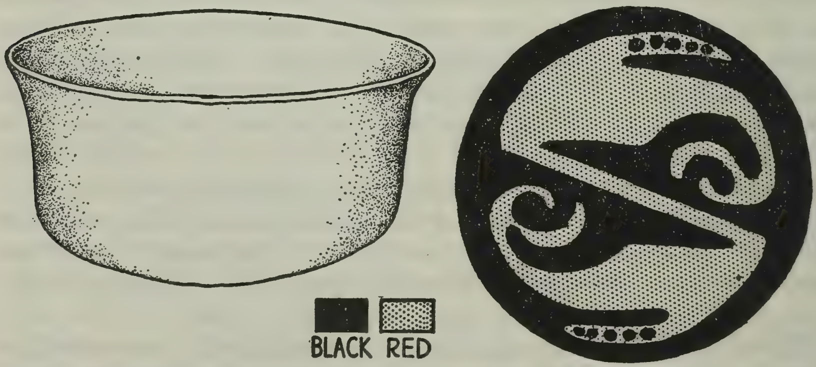

FIGURE 98.—Deep dish of San Agustín style. Two-color negative design. Found in Tierradentro region. (After Bennett, 1944, fig. 7.)

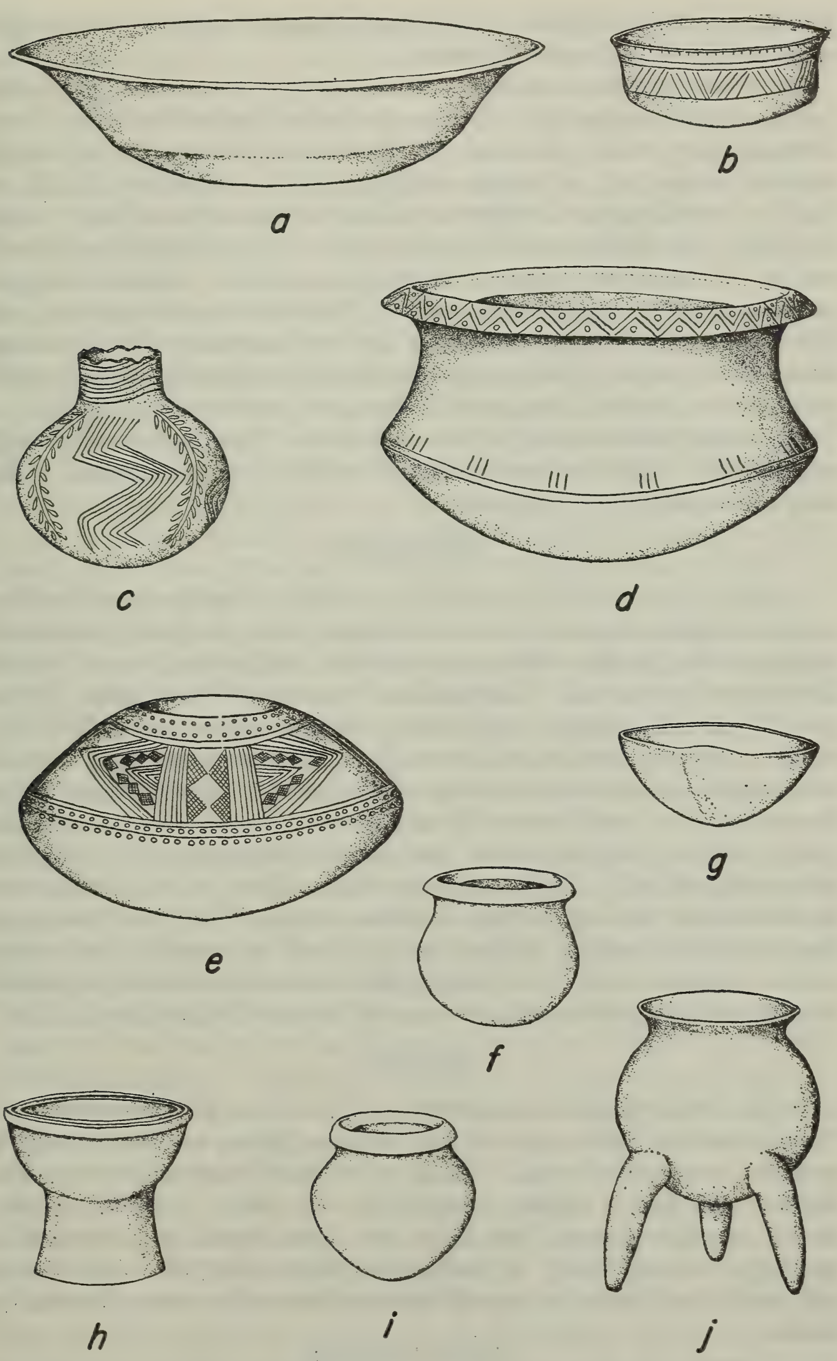

Figure 99.—San Agustín ceramic types. *a*, Plain ware; *b*, incised; *c*, a typical collar-jar with brown-on-orange design; *d*, incised; *e*, incised; *f*, small olla with flaring rim; *g*, calabash-shaped cup; *h*, plain ware pedestal cup; *i*, small olla with folded rim; *j*, plain ware tripod. (After Bennett, 1939, figs. 2, 3, 4, 5.)

pod vessels with solid legs in the form of elongated, slightly bent cones; and bowls with tall pedestal-bases.

Some of these vessels seem utilitarian and show signs of wear and smoke on their exteriors. Others are better finished and may have been used for votive offerings. A majority of the vessels are monochrome brown, red, or orange without further decoration (fig. 99, *a*, *h*, *j*). A small proportion have modeled figures, such as birds, along the rims. On the decorated vessels, incision (fig. 99, *b*, *d*, *e*) and punch are by far the most frequent techniques, and the incised lines are sometimes filled with a white paste. Both two-color negative and two-color positive painting occur, and coil marks may be left as an ornamental device. The designs are simple geometric patterns such as triangles, rows of dots, parallel lines, and superimposed angles.

Except for ceramics, clay artifacts are rare. Figurines are dubiously associated. Plain, heavy clay spindle whorls are found, which is the only direct evidence of weaving.

ORNAMENTS

Among the body ornaments of the ancient inhabitants of the San Agustín region, archeological excavations have produced specimens corresponding to the necklaces, bracelets, ear pendants, and crowns shown on the statues. The necklace beads are of hard rock. Some are flat and hexagonal, and crudely made; others are cylindrical, with a notch on one end to fasten them; and still others are tubular or pear-shaped, with an opening at the point. Among metal ornaments are nose pendants cut from a sheet in the shape of a crescent moon, and ear pendants with four-sided wire hoops and a circular plaque of gold leaf. In Tierradentro are necklaces of gold leaf formed of bands and circular plaques, necklace beads of leaf that had been hammered and twisted in the shape of small zoomorphic heads, and a little repoussé mask with features like those of the statues from San Agustín and vaguely similar to some of the motifs in Chavín, Perú.

WEAPONS

Some of the polished stone axes could have been offensive weapons. Two stone war clubs very similar to those shown on the statues of warriors were also found. These were short, tapered toward the handle, and had a human nose or face in relief. Shields are also shown on the statues, but have not been found archeologically, possibly because, being of wood, they have decayed. Also found are spears, and round stones of various sizes which were thrown by hand.

TIERRADENTRO

The area of Tierradentro, centered around the town of Inzá in the the Department of Cauca, has many archeological remains of typical

San Agustín culture—statues, globular jars, tripods, cups with horizontal projecting rims, and flattened jars with down-turned rims. However, the outstanding finds are of another culture, the Tierradentro style, characterized by hypogeums, or underground rooms. These chambers are excavated in the bed rock, a soft granodiorite, on artificially leveled terraces along the ridges, or on the tops of high hills. They are generally circular or elliptical in plan, have a roof that is vaulted, flat, or cut on a slant, and have sides with inset recesses or niches. One descends into the largest chambers by means of a shaft with well-hewn straight or circular stairs. The interior is covered with a white cement which conceals the imperfections of the excavation and forms a background for the decorations, which are painted in black, red, and sometimes orange (pl. 175, *top*). The designs range from parallel lines or solar figures in the more simple examples at Loma Alta, to bands of concentric rhomboids, and painted and relief human bodies and faces, in the majority of the subterranean rooms in the San Andrés zone. Detailed descriptions of two simple examples at Loma Alta and one elaborate type at San Andrés will serve as illustrations.

One tomb at Loma Alta consists of a small room with an elliptical floor, flat roof, and almost vertical walls. It measures 10 feet (3.04 m.) in width and 7 feet (2.41 m.) in depth. The entrance arch, 32 inches (0.8 m.) wide, opens on the east toward the bottom of the descent shaft, which has steps placed in front of the entrance. This shaft was filled with earth, and stones formed a covering which prevented the earth from entering the excavated room. A horizontal decorative band in relief runs around the entire wall just below the roof and from the front to the entrance near the right are five sun figures with hollow centers painted red, from which radiate lines painted alternately red and black in the first figure to the left, and white and red in the four remaining figures.

Another example of the simple type is an excavation which is 6.3 m. (about 21 feet) wide, 3.5 m. (11½ feet) deep, and 2 m. (7 feet) high (the usual height of this type of excavation). Its entrance arch on the northwest side is 1.5 m. (5 feet) wide. The panels forming the walls and roof are notably curved and the entire wall surface is decorated with broad horizontal lines placed thus: A white line at 0.7 m. (2.3 feet) above the floor; a red one at 0.15 m. (½ foot) from this; at 0.1 m. (4 inches) from the first line, another white one; a blank space above, 0.38 m. (15 inches) wide; then the white line repeated, followed by a red one at 0.5 m. (19 inches); at equal distance from the latter, another red line; and at 0.1 m. (4 inches) from the former, a white line which completes the decoration. In the floor of this excavation are 10 small irregularly placed pits filled with decayed human bones and earth. The openings of the pits had been disguised.

On the high ridges there are 50 of these simple chambers, but in the low foothills of the Cordillera near the San Andrés stream, are underground rooms with three, four, five, and six niches. Although the general construction in the lower area is better, some of the rooms have no painted decorations, or else are decorated so poorly that marks left by the instrument with which they were excavated are still visible, and the surfaces are very irregular.[2]

A subterranean chamber on the Segovia estate is an example of the more elaborately decorated type. The entrance arch was obstructed by a large flat granite slab resting on the lower steps of the stairs. The lower surface of the slab was carved with two round eyes and an animal mouth, possibly a toad's. The earth filling the shaft contained pieces of oval quartz mortars, bits of pestles, and common unadorned pottery. The earth that partly filled the interior of the excavation contained pots of very fine polished red clay decorated with either red paint and incisions filled with white, or black geometrical drawings. Other pots had designs in relief of human and animal shapes, especially lizards and snakes. One pot contained pieces of crumbling human bones. The central chamber is entered from the east by a passage way 1.0 m. (39 inches) long, 1.68 m. (5½ feet) high, and 0.7 m. (28 inches) wide. The chamber itself is 8.35 m. (27 feet, 3 inches) wide, 5.2 m. (17 feet, 3 inches) long, and 2.28 m. (7 feet, 7 inches) high, supported near the center by two columns, 2.28 m. (7 feet, 7 inches) high, 0.6 m. (23 inches) wide, and 1.1 m. (43 inches) deep, and separated by a space about 1.3 m. (53 inches) wide. There are seven niches in the walls of the chamber, separated by pilasters ornamented with grotesque human faces in relief, and painted in black on the white background. Elsewhere, the decorations consist of black rhomboids on the side niches and roof, and black and red ones on the central niche, the columns, and the roof. There is a slightly projecting horizontal cornice from which falls a chamfer extending on all sides to the cornices surrounding the niches, at which points the chamfer curves to form an entrance step which terminates in another oblique chamfer extending to the floor.

The ceramics found in these subterranean rooms are generally fragmentary. The following types are common: Dark coffee-colored bowls with cord-marked surfaces; cups with their widest diameter at the rim; larger vessels of the same shape with polished surfaces, varnished red and with angular or rhomboid decorations painted black and white; large open-mouthed jars decorated with bands in relief made up of snakes adorned with cuts filled with white, or with modeled anthropomorphic or zoomorphic figures, all with the punctations filled with white paste (pl. 175, *bottom*). Some simple black-on-red and plain black ware is also found. These ceramic types are unique in Colombia and vaugely suggest Amazonian affiliations.

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[2] This is evident in a small excavation discovered by the author in January of 1942, adjacent to the best ones on the left bank of the San Andrés stream.

Gold is the only metal which has been found in association with Tierradentro style, and even this is rare. Stone artifacts include polished axes, chisels, stone heads, and circular grindstones, some of which are painted on the sides in black, white, and red. One four-footed grindstone has been reported. Two crude statues were found in one of the subterranean chambers, but otherwise stone carving of Tierradentro style is unknown.

The Tierradentro style has so far been encountered only in these subterranean tombs. No habitation sites or surface finds have as yet been identified with this period. Disintegrated remains of skeletons are found in broken urns or in pits in the floors. Many of the burials were secondary, since the bones are covered with red paint, and there is some suggestion of cremation.

Neither the *Andaquí* who dwelt in the San Agustín region nor the *Páez* living in Tierradentro at the time of the Conquest were aware of the archeological remains in their territories. Likewise, the culture of these Indians gives no indication that they might be the descendants of the peoples who left these monuments. Ultimate identification, then, of the builders of San Agustín and Tierradentro must await broad comparison throughout the Andean region, and above all more excavation.

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THE ARCHEOLOGY OF THE POPAYÁN REGION, COLOMBIA [1]

By Henri Lehmann

INTRODUCTION

At the time of the Spanish Conquest, the Popayán Valley and the surrounding mountains were densely populated by a great number of tribes, most of them horticultural. These, the *Popayenense* or *Guambiano-Coconuco* group, are described in this volume (pp. 969–974).

The archeology of this area has not been definitely related to these historic tribes (map 1, *No. 21*). As most excavations have been made by treasure hunters, a description of the archeological materials must be based largely on recent investigations made by the author (Lehmann, 1943).

STONE SCULPTURE

A series of partly buried stone statues was discovered in the mountains of Popayán, bounded by Pandiguando (El Tambo township) to the south and the township of Suárez to the north. Some of these statues were found on the banks of the Río Cauca, but most were farther back in the Cordillera Occidental, in the region where the *Chisquío* lived. One statue was found in the neighborhood of Popayán itself. Other objects, such as milling stones, have been found at Malvasá and in *Coconuco* territory around Calaguala, but little study has been made of them.

In general, these sculptures are much simpler than those of San Agustín. They are more like columns on which the sculptors have depicted heads, arms (the elbows being at a right angle in most cases), legs, and often the sex organ.

PICTOGRAPHS

Pictographs or paintings on stone are preserved at several places. At Guambía, near La Primera Vereda, north of the Río Piendamo, is the figure of a horned animal with a body like that of an insect; two front legs and two rear legs are represented. To the right, apparently having some connection with the animal, is a large spiral, which possibly represents the animal's tail or which may be some other symbol, such as a spider web. There are other unidentifiable fragments of painting. The paint is black, probably mineral pigment.

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[1] The archeological materials described in this article represent still another style in the Upper Cauca zone described in the article on general Colombian archeology.

In the Piñon Mountain, between Silvia and Pitayó, there are bright red and seemingly rather recent paintings, the figures including circles, disks, rectangles, a snake, a few animals, and one human figure. The style recalls the pictorial histories painted on bison skins by the Plains Indians of North America, and may be a narrative painting of the life of the person shown at the lower right of the painting, in a crouching position.

BURIAL CUSTOMS

Excavations in a cemetery on the hill called "El Chirimoyo," belonging to the finca of "La María" near the town of Popayán, afford information on burial customs. The graves have shafts about 20 to 35 feet (6 to 11 m.) deep, and less than 3 feet (1 m.) square. At the bottom of each shaft is a vaulted chamber, a little over 6 feet (2 m.) long, its orientation being variable. Several chambers, each with a separate entrance, may be found one on top of another in the same shaft. Each contains the remains of one body only.

The graves can be classified on the basis of their contents. Some contain one or two small vases or bowls and a few spindle whorls; others contain a small stone hatchet and adzes. Spindles and stone hatchets are never found in the same grave, which suggests a correlation of sex and burial furniture. Nose ornaments (narigueras) have been found in both types of graves, but they are larger in the male burials.

Four clay sausage-shaped objects, placed in two bowls, were found in two separate graves. The use of these objects is unknown although similar specimens with a few perforations have been found in a grave in Guazábara (El Tambo). The earth in certain graves showed evidence of organic decay around the skeleton, perhaps of clothing.

All grave objects except the nose ornament were placed at the right of the corpse, near the stone upon which the head rested.

CERAMICS

Ten clay vessels were encountered. Five are globular bowls with rounded bases. Three of these have two small symmetrical lugs, and one has a single lug. All vessels are small, except for one tall globular jar. This has two small zoomorphic relief lugs. Two similar jars were excavated in Chiliglo (*Coconuco*), and one of these also has the two small side lugs. These relief ornaments are so similar stylistically that they clearly belong to the same culture. Other jars of the same style have been found at Chisquío, at Río Hondo (between Popayán and El Tambo), and in the neighborhood of Guambía.

The spindle whorls are conical, and decorated either with red paint or with engravings. Similar spindles, without decoration, are still used by the *Guambiano* and others have been found in Guazabarita and at Chisquío.

A large burial urn, which contained the remains of a 3 or 4 year-old child, was found on a hill near Popayán. There was a hole pierced in

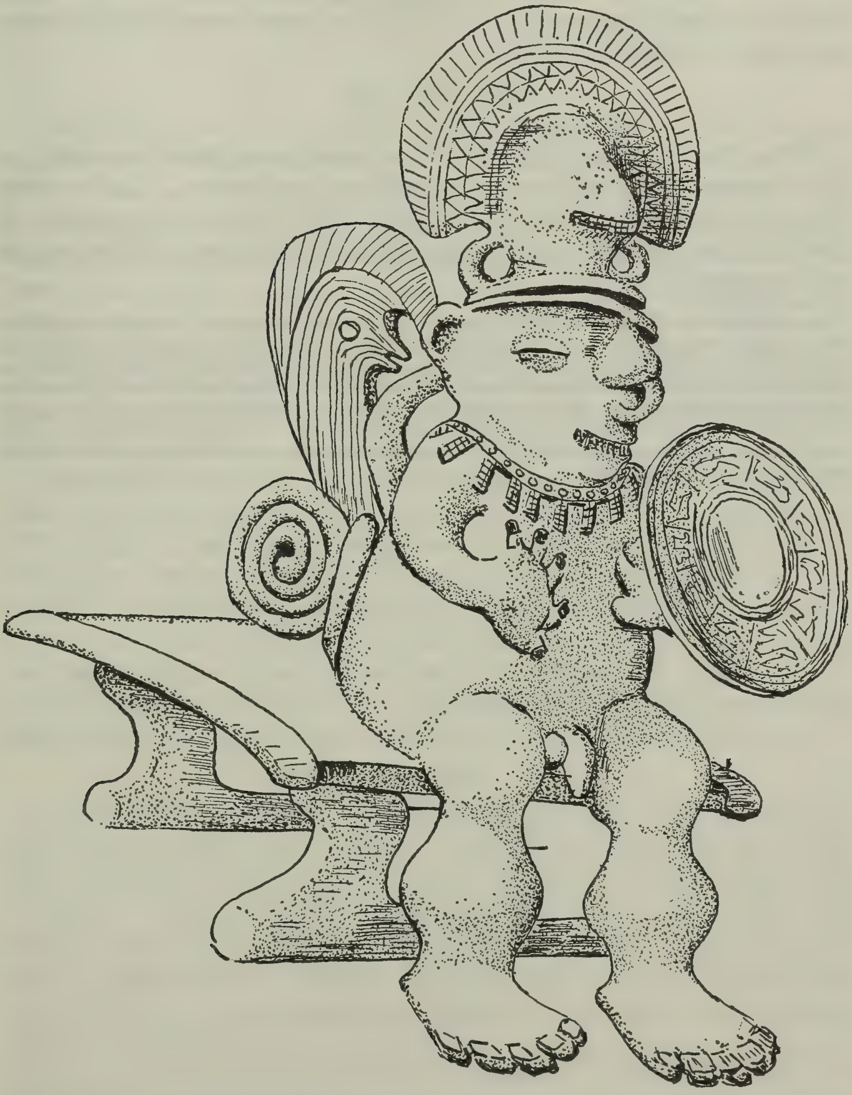

Figure 100.—Popayán pottery figurine. Represented as seated on bench. (After Bennett, 1944.)

the bottom of the urn, Other graves in this cemetery are similar in shape to those at "El Chirimoyo," but are without pottery. Adult corpses were extended in the chambers, so the use of urns seems restricted to child burial.

A comparatively homogeneous style of pottery is found in the whole area covered by this paper, but there are also aberrant styles. Poorly baked clay figurines have been found at the Marquesa hacienda, near Timbío, and in the neighborhood of El Tambo. The figures are represented as seated on thrones, with great feather headdresses. They have abnormally large calves, as if the legs were bound tightly above and below the calf (fig. 100).

STONE AXES

Some stone axes of the *Carib* type have been found scattered in various areas, but their exact provenience is unknown. A few come from the small cordillera called La Tetilla, west of Popayán. A *Carib* invasion may have left its mark in the Popayán Valley, at an undetermined period.[2]

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[2] According to Rivet (1943), some nose ornaments of the "caracolí" (snail) type, found in several places, seem to imply *Carib* influence. There are two types of nose ornaments in the Popayán Valley: the spiral type and the "snail" type (caracolí). The first was found in most of the "Chirimoyo" graves, and seems to be distinctive of the *Puben:* the second was found in its standard form at Guazábara (El Tambo); a variation of this type in one "Chirimoyo" grave. That a variation of the *Carib* type is found among the *Puben,* who are not *Carib,* shows that *Carib* traits existed among non-*Carib* peoples. This influence spread south as far as the Patía region, where several caracolís were found in graves in the valley of Río Guachicono, above its junction with the Río San Jorge

TRIBES OF THE SIERRA NEVADA DE SANTA MARTA, COLOMBIA

By Willard Z. Park

INTRODUCTION

The Sierra Nevada de Santa Marta, earlier known as the Sierra de los Taironas or Sierra Tairona, has for more than half a century been of interest to geologists, geographers, zoologists, botanists, and anthropologists (map 1, *No. 22*; map 7). In spite of scientific curiosity about the problems of this area, little systematic research has been done in the region. Intensive zoological investigations,[1] the ethnographic studies of Bolinder among the *Ica* (1925), the linguistic work by Preuss on the *Cágaba* (1919–26), and Mason's extensive archeological excavations in the *Tairona* area (1931, 1939) are to date the outstanding examples of systematic field work in the Sierra Nevada.

Incomplete anthropological research, as well as earlier fragmentary accounts by explorers, travelers, priests, and historians of the Indians of this region, serves to raise numerous problems that can only be solved by systematic field work. Accordingly, the *Cágaba* were selected for intensive investigation, and preliminary ethnographic studies were undertaken by the author in the summer of 1937.[2] Field work among the *Cágaba* was resumed in the summer of 1941. A part of this season was devoted to a reconnaissance of the linguistically and culturally related tribes on the south side of the Sierra Nevada.[3]

SOURCES

Complete ethnographic accounts of the cultures of the Sierra Nevada de Santa Marta are lacking. Bolinder's study of the *Ica* (1925) is based on field work done in 1914–15, supplemented by a brief visit in 1920. The description of *Ica* material culture is excellent; the data on religion are useful but incomplete; and the material on the social organization is meager. Bolinder also includes some notes on the neighboring *Cágaba* and a chapter on the *Motilón* of the Sierra de Perijá. Observations on some changes since Bolinder's last visit to the *Ica* were made in 1941 by Knowlton (1944).

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[1] The work of Todd and Carriker (1922) contains an extensive bibliography of earlier works on the birds of the Santa Marta region.

[2] The initial field work was made possible by a grant from the Social Science Research Council of Northwestern University.

[3] Continuation of field studies in 1941 was supported by grants from the Carnegie Corporation of New York and the American Philosophical Society.

The *Cágaba* were first studied by a trained anthropologist in 1914–15, when Preuss undertook intensive linguistic field studies, principally in the *Cágaba* villages of Palomino, San Miguel, and San Francisco. His collection of myths, analysis of the religion, and notes on the social life are valuable contributions to the ethnography of this tribe (Preuss, 1919–26). The historical interpretations made by Preuss on the basis of material in the myths should be considered with caution. Moreover, a systematic description of the religious structure and life can only be pieced together from the Preuss account supplemented by further field studies.

Earlier, De Brettes on his several trips in the Sierra Nevada, between 1891 and 1895, had used a questionnaire prepared by the Societé d'Anthropologie de Paris to report some valuable details of *Cágaba* culture. His information and the line drawings, depicting material culture, are especially useful (Brettes, 1898, 1903).

J. Alden Mason visited the *Cágaba* in 1923, collecting items of material culture for the Field (now Chicago Natural History) Museum. His unpublished notes afford valuable supplementary data on the tribe.[4]

The geographer Sievers recorded data on the *Cágaba* and other tribes in 1886. His material on cultivated plants is particularly useful, and the data on other aspects of the culture supplement some of the fragmentary reports on the region (Sievers, 1886, 1888).

The linguistic studies made by Celedon (1886, 1892 a, 1892 b) on the *Cágaba*, *Ica*, and the *Buntigwa* also contain some useful ethnographic details.

The *Tairona* are known only through Mason's excellent archeological excavations (1931–39) and scattered and often confused references in the histories of the early Colonial Period. When publication of Mason's reports is completed, the *Tairona* will be described as completely as careful archeological and historical research permit.

The *Chimila* are known principally from Bolinder's brief report (1924) based on short visits in 1915 and 1920 to a handful of survivors of this once numerous tribe. Bolinder has supplemented his field work by a rather thorough sifting of references to the *Chimila* in the earlier historical accounts of the Santa Marta region. The yield from field work and historical research is principally data on material culture; little is to be found on social life and religion.

Historical sources available contain only fragmentary data on the tribes of the Sierra Nevada and of the neighboring Santa Marta region . The principal historical sources are listed in the bibliography. Of particular interest in affording some cultural facts on the tribes of the Sierra Nevada as they were in the 18th century is the translation by Nicholas (1901) of the portions of Father de la Rosa's "Floresta de la Santa Iglesia catedral de la Santa Marta" dealing with the Indians. In order to supplement the data available in the known historical sources, it would be highly desirable to sift systematically the documentary material that may still be cncovered in Columbia;

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[4] These notes have been made available through the generous cooperation of Dr. J. Alden Mason and the Chicago Natural History Museum.

Systematic studies of the bird life (Todd and Carriker, 1922) and the reptiles (Ruthven, 1922) of the Sierra Nevada have been published. Both of these monographs contain useful summaries of the geography of the region. Additional data on the geography have been recorded by Sievers (1888), Taylor (1931), and Seifriz (1934).

GEOGRAPHY

The Sierra Nevada de Santa Marta with an area roughly estimated to be 5,000 square miles (about 13,000 sq. m.) is an isolated mountain mass bordering on the Caribbean Sea in the extreme north of Colombia. The main axis of this mountain system runs east and west in contrast to the north-south axis of the Cordillera of Colombia. The Sierra Nevada is, in fact, geologically and geographically distinct from the Andes, being separated by the Magdalena River in the south and the open valley of the César River to the southeast.[5]

This mountain area is characterized by remarkable heights, the peaks being estimated variously from 18,000 to 21,000 feet (about 5,500 to 6,400 m.), although the Sierra has a small base which is about 90 miles (about 145 km.) along the north, 120 miles (about 190 km.) on the southeastern side, and 90 miles (145 km.) on the west. Everywhere in this system, the mountains rise abruptly from the surrounding plain. Consequently, the area lacks broad valleys and is characterized by narrow ravines, or quebradas, with extremely high, steep sides.

Throughout the Sierra Nevada, the year is divided into two distinct seasons, the rainy and the dry. The rainy season extends from April to November or December, depending on local conditions. On the southern side of the mountains, June and July are marked by a lull in the rainy season. Rainfall on the northern slopes is substantially greater with a resulting heavier growth of vegetation than is characteristic of the southern side of the mountains.

The vegetation shows variations corresponding to the distinct differences in altitude, temperature, and rainfall. In the areas occupied by the Indians these variations are reflected in the diversification of the plants and trees, cultivated or utilized in the wild form. Indian economy is based on plants which vary from tropical species, such as bananas, plantains, sugarcane, and pineapples, through the characteristically temperate-climate crops of maize, onions, potatoes, and cotton. Above the range of these plants are the páramos starting at about 10,000 feet (about 3,000 m.) on the south side of the mountains and lying above 12,000 feet (about 3,600 m.) in the north. These rocky grasslands are utilized only to a limited extent for the grazing of cattle and sheep. Above the páramos are the glaciated zones and the region of permanent snow.[6]

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[5] Useful descriptions of the geography of the Sierra Nevada de Santa Marta and the adjacent lowlands are to be found in Todd and Carriker (1922, p. 6 ff.), Carriker *in* Ruthven (1922, p. 17 ff.), and Sievers (1888).

Supplementary data on the geography, including the flora, are available in Seifriz (1934, pp. 478–85), and Taylor (1931).

The fauna of the Sierra Nevada is not abundant. Some species of birds are numerous in the lowlands but relatively few forms occur in the higher mountains. The peccary and the agouti are the most abundant mammals. Tapirs are fairly common above 3,000 feet (about 900 m.). Deer are scarce everywhere. Rodents and squirrels are probably the most common of the faunal life of the mountains.

TRIBES

It is impossible at the present time to make precise identification and to give accurate locations of all tribes living during the Colonial Period and earlier in the Sierra Nevada de Santa Marta. In fact, identification and location of those tribes existing in the region during the 19th century must await detailed systematic field studies supplemented by a careful sifting of documentary sources.

Arhuaco is the collective name widely used in the literature to designate the *Chibchan*-speaking tribes of the Sierra Nevada.[7] The term as used since the 17th century designates only the Highland groups possessing relatively simple culture and includes the *Cágaba*, *Ica*, *Buntigwa*, *Sanha*, and others. The *Tairona*, *Chimila*, and related highly cultured groups of the foothills and Coast, although linguistically related, are not included in this designation.

Father de la Rosa, writing in 1739 (1833, pp. 611, 614–15), identified as *Arhuaco* the Indians living in the Sierra Nevada between Santa Marta and Río Hacha and those of San Sebastián on the southern side of the mountains. He also places one of the important *Arhuaco* (probably *Cágaba*) cansamarias (temples) on the headwaters of the Río Ranchería. The territory between Santa Marta and Río

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[6] A summary of the range of variation in vegetation is available in Todd and Carriker (1922, pp. 14–21), Ruthven (1922, pp. 21–28), and Taylor (1931, table 1, p. 557).

[7] The use of the term *Arhuaco* has resulted in confusion. A number of authors, misled by the similarity of this designation to *Arawak*, have referred to the tribes of this region as belonging to the latter linguistic family. There can be no question, however, but that these people are *Chibchan* in speech. The people of the uplands are, moreover, unacquainted with the name, *Arhuaco* having no collective designation for the several tribes, although some degree of cultural and linguistic relationship is recognized. It would seem desirable, therefore, to discard the term *Arhuaco*, substituting a more appropriate name to designate the cultural, and perhaps linguistic, enclave of tribes in the Sierra Nevada.

Hacha roughly corresponds to the recent habitat of the *Cágaba*, and San Sebastián is where the *Ica* are to be found today.

The habitats of the *Cágaba*[8] and the *Ica*[9] can be determined with a reasonable degree of certainty from De la Rosa and several other sources. In the 17th and 18th centuries, the *Cágaba* occupied the northern and eastern sides of the mountains, extending southeast to the upper Río Guatapurí. Preuss (1919–26, p. 37) recorded myths and traditions which indicate that the *Cágaba* have long regarded Marmaronqui near Marocosa on the upper Río Ranchería as the site of an important cansamaria (temple and club house). In the late 18th or early 19th century, they established a village and cultivations on the upper Río Frío. The *Ica* have traditionally lived in the Valley of San Sebastián, on the upper Río Fundación, on the Río Templado, and to the east in the country west of Atánquez.

The present tribal territories of these groups have not, however, remained the same throughout the period of contact with Whites and mulattoes. The *Cágaba* have been withdrawing over a period of several hundred years into the more inaccessible regions of the mountains. A similar movement of the *Buntigwa*, who formerly occupied the present site of the village of Atánquez and the surrounding territory, has been recorded in field work. Numbers of the *Ica* have also left, at least temporarily, their former village of San Sebastián to retreat into the mountains in the face of missionary encroachment (Knowlton, 1944, p. 263). All these shifts, however, have not been a movement to a new habitat, but only a retreat to the more inaccessible portions of the old tribal territory.

The other so-called *Arhuaco* tribes are less precisely identified. The *Buntigwa* (*Busintana*) living south of San José, on the upper Río Donachui and in the region of the present town of Atánquez, are doubtless the *Antanque* of Celedon (1892 a). The *Sanha*, infrequently mentioned by Celedon and Bolinder, appear to have occupied a small territory northwest of the *Buntigwa* and adjacent to the *Cágaba* on the headwaters of the Río César.

Turning to the tribes with more highly developed cultures living on the Coast and in the foothills of the Sierra Nevada at the beginning of the Period of the conquest, tribal names and locations are even more confused than in the case of the upland dwellers. The *Tairona*, the group most widely mentioned in the literature, inhabited the Coast and foothills to the east of Santa Marta, certainly as far as the Río Don Diego, and probably their territory extended still farther east to the neighborhood of Dibulla. Inland, remains of what was probably *Tairona* occupation are found at La Cueva above Dibulla.

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[8] The *Kagaba* of Preuss and other recent writers, the *Arhouaques-Kaggaba* of De Brettes (1903), and the *Koggaba* of Celedon (1886) are reproduced here as *Cágaba* in conformity with the phonetic system adopted for this volume.

[9] The *Ijca* of Bolinder and the *Bintukua* of Celedon (1892 b)and De Brettes we give as *Ica*, which conforms to the phonetics adopted for this volume and is, therefore, preferred to the *Iku* of Knowlton.

According to Pedro Simón (quoted by Preuss, 1919–26, p. 41), the *Tairona* also were found to the west and south of Santa Marta. Several of the chroniclers of the early history of Santa Marta mention expeditions from that place to the country of the *Tairona*, referring also to other groups, such as the *Bonda, Bondigna, Taganga, Gaira*, and *Dorsino*, as tribes in the immediate neighborhood of Santa Marta. Precise location of *Tairona* territorial limits and their relationships to other tribes mentioned in the early accounts of the Santa Marta region must await publication of J. Alden Mason's work on the *Tairona* in the documentary sources.

The *Chimila*, another *Chibchan* tribe of the western Sierra Nevada foothills and lowlands, appear to have occupied the region to the south and west of Santa Marta. Careful examination of the early references to this tribe would seem to justify placing its habitat provisionally in the region south from the Río Frío to the confluence of the Río César and the Magdalena River. Bolinder, who has summarized the principal historical references to the location of this group (1924, pp. 203–05), places the habitat of the few surviving *Chimila* in the region between Fundación and Valledupar near the Río Ariguani. Despite several early references to the *Chimila* as a branch of the *Tairona*, this group certainly maintained a distinct tribal identify with apparently many cultural features that distinguished it from the *Tairona*.

POPULATION

No precise count or estimate of the Indian population of the Sierra Nevada has been made, and the prevailing custom of each family moving frequently from one to another of its isolated clusters of houses makes it extremely doubtful that a satisfactory census could be taken of the upland dwellers. The tribes of the foothills and lowlands, such as the *Tairona* and *Chimila*, have been entirely destroyed; hence it is only possible to make the roughest estimates of their numbers at the time of discovery. Sievers (1886, p. 338) estimated the population of the remaining mountain tribes at a total of about 3,000 persons, and Seifriz (1934, p. 483) placed their numbers at the same figure in 1932.

Observations made in 1937 and 1941 suggest that the number 3,000 was approximately correct for recent years. The *Cágaba* are the more numerous, with roughly some 2,000 persons. There are about 500 *Ica* living, and approximately 500 *Buntigwa*. No information is available as to whether any *Sanha* survive. Contrary to the belief expressed by casual observers that the mountain tribes will soon be extinct, it is likely that the population is fairly stable, maintaining itself in recent generations without significant losses or gains.

The *Tairona* had a large population at the time of their discovery, probably with the *Bonda* and other groups around Santa Marta numbering into the scores of thousands. Allowing for the exaggeration of the early chroniclers, their frequent references to the large numbers of Indians encountered in the vicinity of Santa Marta point to a dense population

Similarly, the *Chimila* were apparently numerous, but in 1920, according to Bolinder (1924, p. 202), only one family numbering seven members could be found.

It can, therefore, be assumed that at the time of discovery the foothills and lowlands of Santa Marta and the regions to the east along the Coast and to the west and south to the Magdelana River were densely populated but that the mountains were more thinly settled with a population perhaps no greater than three or four times that to be found there today.

Settlements.—Permanent Indian villages in the Sierra Nevada are probably the result of European influence. Prior to the Colonial Period, individual families followed a seasonal rhythm in moving from one isolated family dwelling to another, gathering with other families at one of the cansamarias, or temples, only for religious festivals. The temple, with the small surrounding cluster of dwelling houses for the priest, his wives, and the novices, was then the focal point of tribal interests and community activity. Apparently, this was not only the case with the *Cágaba* but also was characteristic of the other mountain tribes.

The Colonial authorities and the priests, in order to collect taxes more effectively, to secure the required labor for maintaining trails, churches, and other public buildings, and to permit a more careful supervision of the spiritual well-being of the Indians, forced them to accept the principle of villages. But today these settlements are deserted for most of the year, as the inhabitants follow the planting and harvesting seasons of the cultivations at different elevations. The important temples, moreover, remain isolated from the larger villages. The communities clustering around the principal *Cágaba* temples of Mocotama, Taquina, Noavaka, and Mukangalakue remain reserved for priests, their wives and attendants, and the novices. Only secondary temples, usually serving principally as men's dormitories (pl.178, *bottom*), clubhouses, and workshops, are to be found located actually within the large villages, as is the case at San Miguel, Palomino (Taminaka), and San Francisco. In other villages, such as at San Andrés and San José, no native priest (mama) is in residence, the temple having only the secular functions of dormitory, clubhouse, and workshop, reserved exclusively for men.

HISTORY

The impact of European civilization was first felt by the Coastal tribes, and, with the founding of Santa Marta in 1525, the pressure on them to give up their gold and to be servants to the conqueror increased steadily. This contact led to the early extermination of the Coastal people, but the upland people retreated into the more inaccessible parts of the mountains.[10] It is not known precisely how long the cultures of the Coastal tribes withstood the impact, but it seems likely that cultural identity was destroyed here by the early 17th century.

The continued existence of the mountain tribes was, of course, modified by contact with the Spaniards, principally through priests and traders, and by the destruction of the more powerful, culturally dominant Coastal people, particularly the *Tairona*. That the *Cágaba* were to some extent dependent upon, even subordinate to, the *Tairona* is indicated by traditions, mythological material, and linguistic evidence. (See Preuss, 1919–26, p. 40 ff.)

The *Cágaba* on the north side of the Sierra Nevada have been exposed to 400 years of contact with European civilization, principally through the intermittent efforts of the priests. The culture here has been modified by this contact: New plants have been introduced, a rectangular house threatened to replace the circular dwelling, clothing has been modified, domesticated animals have been accepted, simple iron tools have replaced aboriginal devices, and European themes appear frequently in the mythology. Many more individual items have been added or have superseded old ways, but the form, the outlook, the interpretation, and the evaluations are not European but Indian. Perhaps they are largely pre-Columbian *Cágaba*.

The aboriginal life on the south side of the mountains has not survived to the same degree as it has with the *Cágaba*. There has been substantially more intermarriage and assimilation with aliens and non-Indian Colombians on the southern side of the Sierra. The fate of such former Indian villages as Atánquez has been described by Bolinder (1925, p. 186 ff.). These changes are to be ascribed to the greater frequency and effectiveness of commercial and missionary contact that have been in contrast to the relative isolation of the *Cágaba* living on the northern slopes.

CULTURE

SUBSISTENCE ACTIVITIES

Agriculture.—The tribes of the Sierra Nevada depend principally upon agriculture for their subsistence. The pre-Columbian agriculture of this region has in the main been modified only by the introduction of alien plants, such as sugarcane, plantains (*Musa paradisiaca*), and bananas (*Musa p. sapientum*). Aboriginal tools of cultivation have been replaced by the machete and a small iron spade.

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[10] See, for example, the comments of Father de la Rosa (Nicholas, 1901, p. 615) on the tactics of the Indians when the priests attempted to destroy aboriginal religious paraphernalia and to force them to become converts. The Indians made no effort to resist by force; they simply moved to regions difficult to reach. The *Ica* have followed this pattern in the period 1920–40 (Knowlton, 1944, pp. 263–66)

The principal subsistence crops are yuca (sweet manioc), maize, potatoes, arracacha, plantains, sugarcane, and malanga. These are supplemented with onions, beans, sweet potatoes (*Ipomoea batatas*), avocados, pineapples, and oranges. There are local differences in emphasis on the particular type of crop because of elevation, soil conditions, and similar factors. The *Cágaba*, for example, grow substantial quantities of sugarcane, whereas the *Ica* devote little time and land to its cultivation.

Cágaba farming in recent years is largely devoted to the production of sugarcane in order to supply the demand for panela (a crude brown sugar) in Pueblo Viejo and Dibulla as well as to satisfy the local thirst for fermented cane juice. The *Ica*, on the other hand, do not grow sufficient cane for their own use but must buy panela.

Agricultural techniques are crude, with a correspondingly small yield. Crop rotation and fertilizer are unknown. The grass is burnt off during the dry season, and, with exhaustion of the soil, a new plot is cleared. Irrigation among the *Cágaba* is usually confined to the small plots of coca bushes, but the *Ica* sometimes flood dry places by diverting nearby streams (Bolinder, 1925, p. 48 ff.).

Individual plots of cultivated land are usually small, embracing, as a rule, an irregular area of not more than one-quarter of an acre. Customarily, each family will have at least two plots, often four or five, each located at different altitudes.

Men, women, and children work together in cultivating the garden plots, the family working as a unit on its individually owned tracts of land. Men are responsible for clearing the land, which is done by burning. All members of the family join in planting and weeding. Women and children harvest most of the crops. Men and boys, however, cut the sugarcane and grind it with the trapiche, or cane mill (pl. 180, *bottom*).

The *Cágaba* gather few wild plants for food, and this is also reported to be the case with the *Ica* (Bolinder, 1925, p. 55). Avocado and orange trees grow wild, but their yield does not form a significant part of the diet. Avocados are more frequently fed to the pigs than eaten by human beings.

Other cultivated plants include cotton, agave, coca, and tobacco. Coffee bushes grow in a semiwild state, and the beans are picked only to be sold to the traders. Substantial quantities of cotton are grown in the region of Palomino, some being sold to other *Cágaba* villages. Coca is carefully cultivated, often on terraced plots, in the villages and near the houses on the cultivations. The coca vines are well tended, pruned and irrigated. Tobacco is allowed to grow semiwild in the village streets and near the dwellings.

Maguey, or agave (*Agave americana*), grows near the villages and around most family dwellings. It is planted and tended rather carefully until well established, when it requires no attention. It is the source of fiber used in making mochilas, or bags, string, and rope.

Hunting and fishing.—Hunting and fishing are relatively unimportant in the Sierra Nevada, owing in part to the poverty of fauna. A few deer, birds, wild turkeys, and occasionally a tapir are killed with bows and arrows or with antiquated firearms used by some hunters. Traps and small nets are used principally by boys for catching the small fish, birds, and rodents (Brettes, 1903, figs. 17, 24, 25; Bolinder, 1925, p. 43, pls. 14, 18, 21). Although the *Chimila* were doubtless agricultural, the *Cágaba* preserve the tradition that this tribe was their principal source, through trade, of fish and venison. Apparently hunting and fishing figured more prominently in *Ica* economy than with the *Cágaba*.

Domesticated animals.—Domesticated animals do not, with the exception of oxen, play a significant role in present-day *Cágaba* culture. The *Ica* and the *Buntigwa* on the Río Donachui have substantially larger numbers of sheep, pigs, turkeys, chickens, and even dogs. The last was apparently the only pre-Columbian domesticated animal in the Sierra Nevada. Horses are known but rarely kept by the Indians of the mountains.

Although the *Cágaba* now have pigs and chickens, these animals are not frequently eaten. When killed for food, the internal organs are most highly prized. Oxen are killed for meat only on rare occasions and then by a man of wealth, as a gesture of generosity toward the community assembled for a festival. Oxen are kept ostensibly as pack animals, but they are rarely used as such. Men and women will lead an unloaded ox on the trail, carrying on their backs heavy burdens, in order to insure the animal remaining fat and sleek. Prestige attaches to the owner of a healthy, fat ox, and one is sold only with the greatest reluctance.

Food preparation.—Food is customarily boiled, but tubers and ears of maize in the husks are sometimes roasted over live coals. The daily diet, however, usually consists only of sancocho, a thin stew made from vegetables boiled together; infrequently, a small piece of meat or fish is included. The precise ingredients of sancocho depend upon the seasonal variations in the vegetables available, but the plantain is rarely absent. The sancocho is cooked in an earthenware pot over an open fire in the woman's house. When finished, it is placed on a ledge or terrace outside the door for the waiting husband and male children. The solid vegetables are eaten with the fingers and the soup is scooped up with a calabash spoon, one implement usually serving the entire family. The wife and other female members of the family usually sit on the floor, just inside the door, and converse with those eating. When the males have finished their meal, the cooking pot is taken inside the house, where the women and girls finish the contents.

Food preservation and storage.—Few techniques for the preservation and storage of food are known. The location of cultivated plots at different altitudes and the variety of crops permit harvesting of foods the year around. Cakes of panela may be set aside in anticipation of a trading expedition, a small amount of corn may be parched or sun-dried and stored, several bags of potatoes may be hung up in the house, or other tubers may be stored for a brief time, but as a rule women harvest every few days for the current needs of the family.

VILLAGES AND HOUSES

One type of house probably prevailed throughout the Sierra Nevada in pre-Columbian times and is used today by the *Cágaba*. This structure is circular in ground plan with a grass-thatched conical roof (pls. 177, 178, *top*). In recent times, especially among the *Ica*, it has been replaced in part by the rectangular house, which is doubtless of European origin. Judging from the construction of the temple (cansamaria), the walls of all houses were formerly made of plaited, flattened reeds or cane, or at great altitudes, as at Mocotama, they were thatched with thick bunches of grass. In recent times, walls of most dwelling houses are of mud packed between the poles which form the framework of the walls.

Dwelling houses vary from 12 to 16 feet (3½ to 4½ m.) in diameter; temples may measure as much as 40 feet (12 m.). Men construct the frame of the house by setting poles 4 to 6 inches (10 to 15 cm.) in diameter in the ground 6 to 15 inches (15 to 38 cm.) apart. Smaller poles are lashed horizontally with vines to these upright poles. The frame of the conical roof is constructed separately on the ground and, when completed, hoisted into place. Meanwhile, the women have collected and prepared thick bunches of grass with which to thatch the roof.

After the roof is covered, the spaces between the wall poles are packed with mud or covered by plaited, flattened cane. To make mud for the walls, the women carry dirt from the outskirts of the village and mix it with water secured by temporarily diverting a small stream through the streets. The single entrance to the house is usually covered by a door constructed from a single flat slab of wood and hinged on projecting nubs which are carved at its top and bottom corners and inserted into holes in the doorjamb.

No provision is made to permit the smoke to escape, and as a result the inside framework and the storage platform, made of canes laid across most of the interior at the tops of the wall poles, are colored a deep ebony. Some smoke escapes through the doorway, and the rest slowly seeps through the grass thatch on the roof.

The thatch at the peak of the conical roof is weighted with bottomless inverted earthenware pots. A single upright stick holding these pots in place denotes the house of a woman; two upright sticks with a crosspiece lashed between them signifies the dwelling of a man.

House construction calls for the participation on a reciprocal basis of the men and women from a number of families, the men putting up the structure and the women preparing the thatch and making the wall.

The temple, or cansamaria (from "casa de María," house of Mary), is built on the same basic plan as the dwelling house, but its much greater circumference and height necessitate additional support for the greater weight of the roof. This is done by resting the roof on heavy poles that run at an angle from the base of the vertical wall timbers to rings fastened to the inside of the frame of the conical roof. Two of these heavy supporting poles on each side of the two doors form vestibules at the entrances. Horizontal braces lashed in both directions across these supports tend to alter the circular appearance of the interior of the building.

Villages grow without any fixed plan, and as a consequence streets are entirely irregular. Village sites are usually on high ground well above the rivers but located near a small stream from which household water is secured. Each village has near its center a large rectangular-shaped structure with heavy mud walls which serves as the Catholic Church. The doors of these churches in the *Cágaba* villages where no priests are in attendance are secured by an iron chain and a large old-fashioned padlock. The key to the lock usually is kept in the cansamaria.

Near the church is found one or more other rectangular buildings which are erected to accommodate the non-Indian visitors. These buildings are constructed on the same plan as the rectangular dwellings sometimes constructed by the *Cágaba* and *Ica*.[11] Indian travelers stay in the cansamaria, after finding accommodations for their wives, daughters, and babies in an unoccupied woman's house.

The *Chimila* house is basically different from the dwellings of the mountain tribes. Described by Bolinder (1924, pp. 205–11) as oval in ground plan, it resembles the so-called "Palenques" of Central America.

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[11] Bolinder, 1925, p. 17 f., pls. 8, 9, 10, gives the details of the construction of these rectangular houses as well as an account of the earlier type of *Ica* circular dwelling. Also Brettes, 1903, fig. 29.

Individual men's houses are not usually seen in *Cágaba* villages. A man may build a house for his wife and children in the village, but it is customary for him during his stay to sleep in the temple and spend most of his waking hours there, talking with other men or engaged in spinning yarn or weaving.

Housing arrangements at the family garden plots follow the same sharp sex dichotomy. Each man has his own separate dwelling house, which may be shared by his male children but never by females. Each wife has a separate house, usually only a few steps away, with the door facing the entrance to the husband's house. Husbands are not supposed to enter these houses. In recent years, there has been a noticeable tendency among men to ignore this rule when under the influence of alcohol at one of the community drinking bouts, but even on these occasions women still do not enter the temple even if no priest (mama) is in residence, and the building serves only as a dormitory for the men.

The entrances to a number of *Cágaba* villages are marked by substantially constructed, thatch-roofed gateways closed by double slab doors. (See Bolinder, 1925, pl. 5.) In the case of the *Ica* of Pauruba (San Sebastián) (pl. 184, *bottom*), a fence to keep out animals surrounds the settlement. At San Miguel, the fence extends only a few feet on each side of the gate, and at Palomino no fence had been built. It is, therefore, likely that the *Cágaba* have come to regard these gates as symbolic of the entrances to the village.

Household furniture.—Household furniture in the Sierra Nevada is simple. Among the *Cágaba*, it consists of low wooden stools, a few crude pottery cooking vessels, gourd water containers, flat grinding stones, open-net storage bags, or mochilas, suspended on wooden hooks, and an occasional woven basket containing personal possessions. The sleeping equipment differs with the sex of the occupant: loosely netted hammocks for men and boys, untanned skins or woven reed mats placed on the floor for women. The open cooking place, formed by three stones, is in the center of the room. The house may also have large earthenware vessels or the canoe-shaped wooden container used in preparing fermented beverages. The tools, implements, musical instruments, and other paraphernalia usually found in the houses depend upon the sex of the occupant. The contents of the *Ica* houses differ only in slight detail from those just described (Bolinder, 1925, p. 26 ff., table 10, pt. 2, and tables 13, 14, 15, 16), and probably the furniture of other tribes of the region was similar.

The cansamaria, or temple, is invariably furnished with a loom, stools, and long low benches, each made from a single log, and at least two fireplaces to provide heat. In addition, if a priest (mama) is in residence, his masks, other religious paraphernalia, and personal possessions are stored in boxlike covered baskets. Bags, or mochilas, containing raw, unspun cotton are often suspended from hooks. Other furnishings depend on the religious importance of the place, the number of novices in attendance, and the extent of ceremonial activity.

ENGINEERING WORKS

Bridges.—The principal engineering achievement of the mountain tribes is the construction of substantial foot bridges over the larger, swift-flowing streams (pl. 179, *top*). A bridge is built by placing a large log across the stream at a point where it can be supported well above high-water mark by large rocks, often supplemented by, or even supported above, abutments made from numerous poles firmly imbedded in heaps of stones and propping up both the approaches and the main span of the bridge. Railings are formed by placing uprights at both sides of the log where it rests on supports. Poles running parallel to the floor of the bridge are lashed to these uprights. Forked poles are hooked over these railings several inches apart and the other ends tied firmly with vines to the underside of the log that forms the floor of the structure. The result is a narrow foot bridge with V-shaped sides 2 to 3 feet (0.6 to 0.9 m.) high. (See pl. 179, *top*, and Bolinder, 1925, pl. 70.)

At least 10 of these bridges were in use near the villages of San Miguel, Mocotama, San Francisco, and San José in 1941, and several of nearly identical construction were seen on the Río Guatapurí and the Río Donachui. The bridges are constructed by all available males attached to the nearby village and involve considerable outlay of time, energy, and skill. They make possible, however, free passage during the rainy season to the cultivations and temples on both sides of the river, an important consideration to the *Cágaba*, who do not live more than several weeks at a time at any one garden plot.

Trails.—The trails that connect the various settlements, temples, and scattered family dwellings as well as those that lead to the non-Indian towns in the lowlands are constructed and maintained by the Indians. But, adapted to the Indian type of travel, which is on foot, these trails indicate no great engineering skill. At places, ancient stone flagging or pavement is evident, but the mountain people today have no knowledge of this type of construction. The *Cágaba*, however, claim that long ago they were road builders for the *Tairona*, but there is no other evidence on this point.

Stone structures.—A stairway of monolithic blocks of stone leading up to the savanna on which San Miguel is located has puzzled travelers. There is no indication as to the purpose of the construction, and it is doubtful that the short-statured *Cágaba* would have built a stairway with such widely separated steps.

Abandoned stone terraces are common in *Cágaba* territory and occur elsewhere in the mountains. Those on the west side of the river both

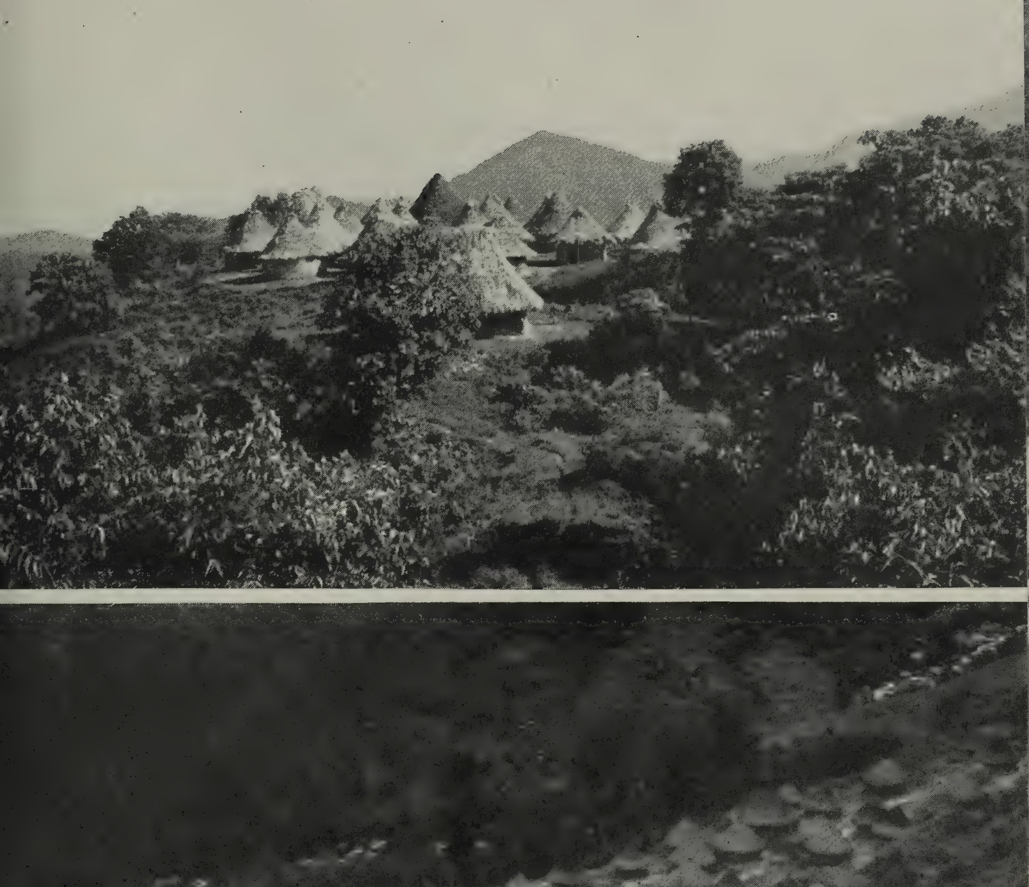


Plate 177.—**Cágaba villages.** *Top:* San Andrés. *Bottom:* San Miguel. (Courtesy Willard Z. Park.)

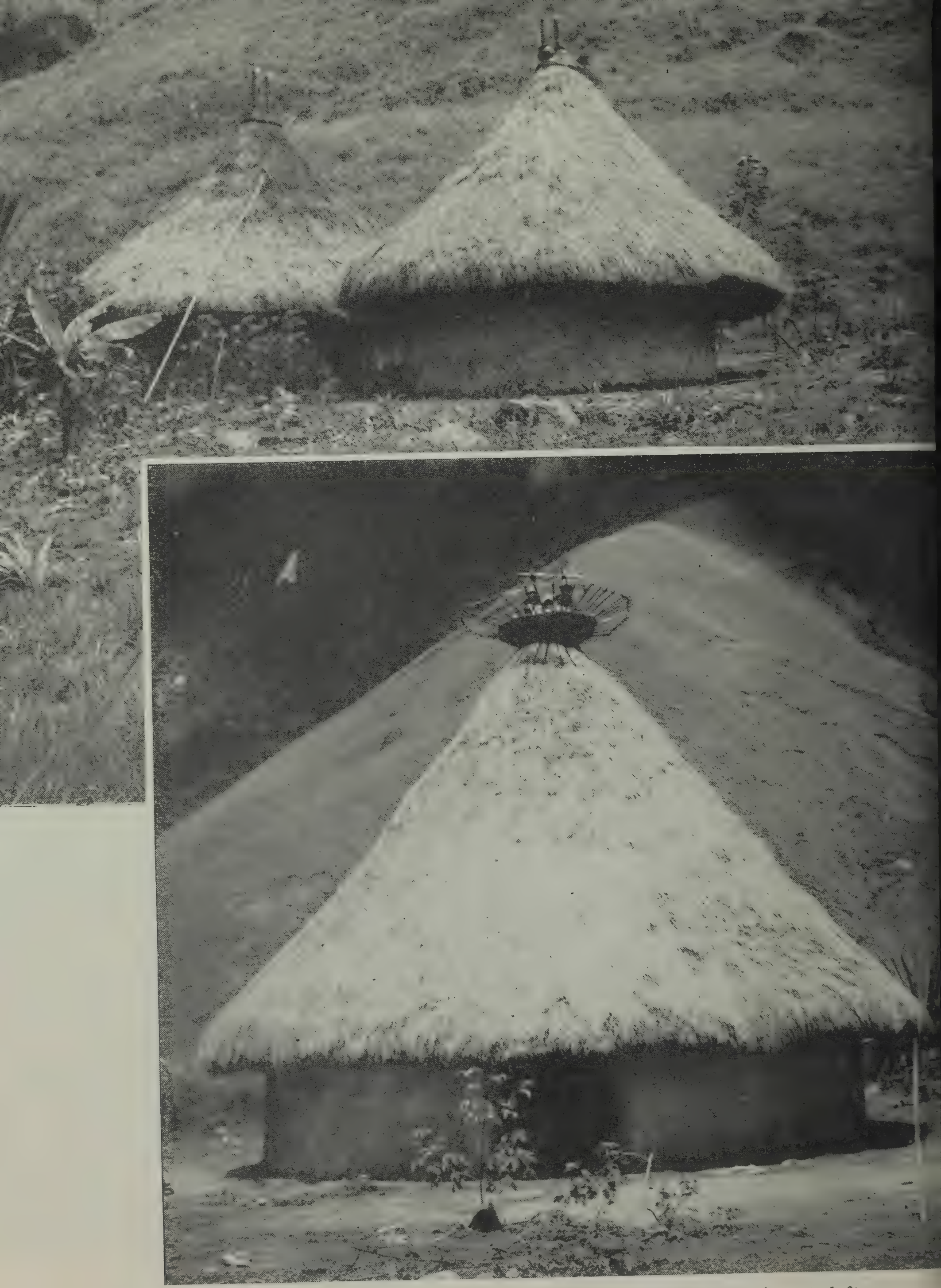


Plate 178.—**Cágaba houses.** *Top:* Man's house at right; woman's, at left. This is an individual farm tract. *Bottom:* Men's dormitory and clubhouse at San Miguel. (Courtesy Willard Z. Park.)

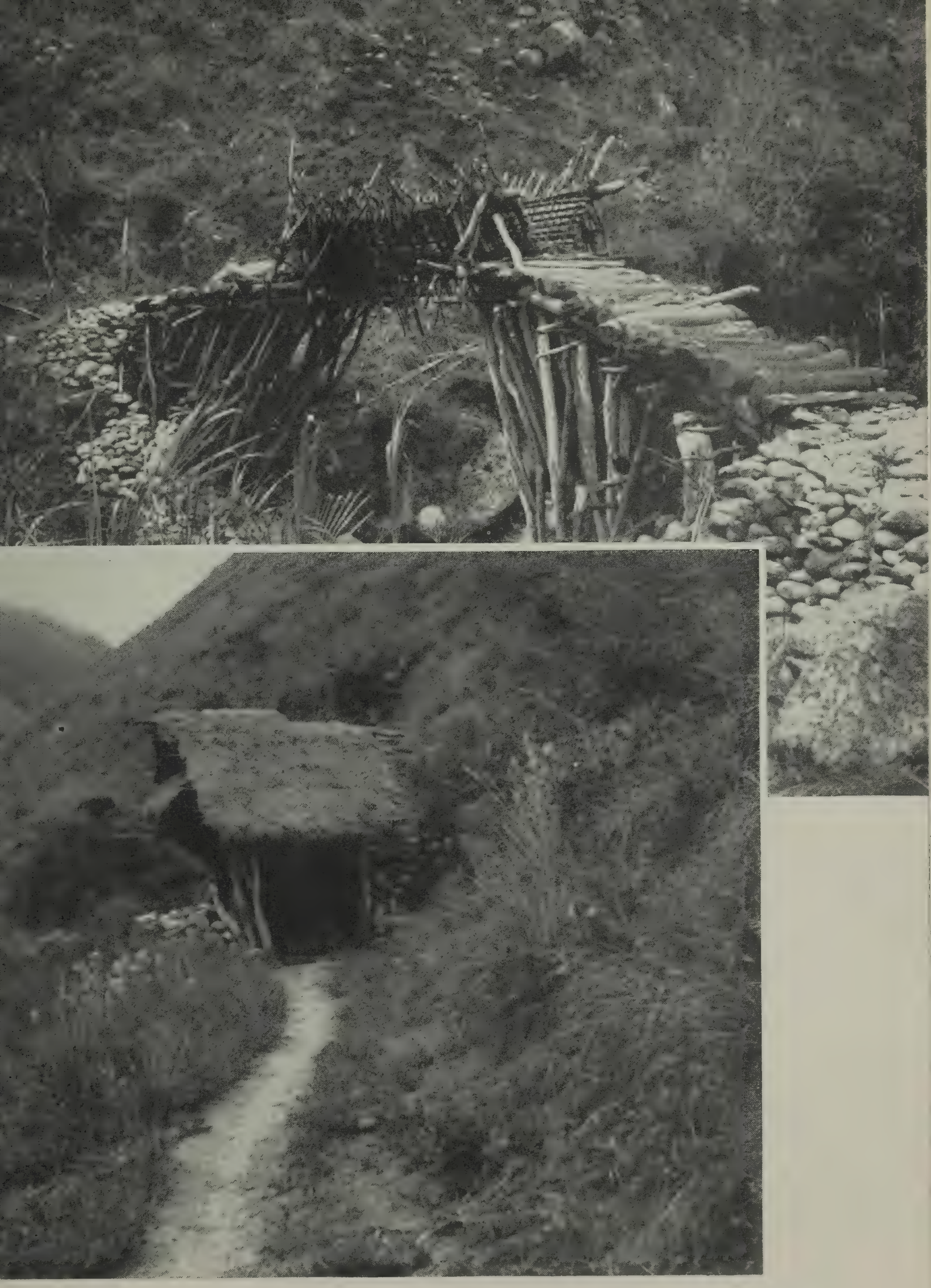
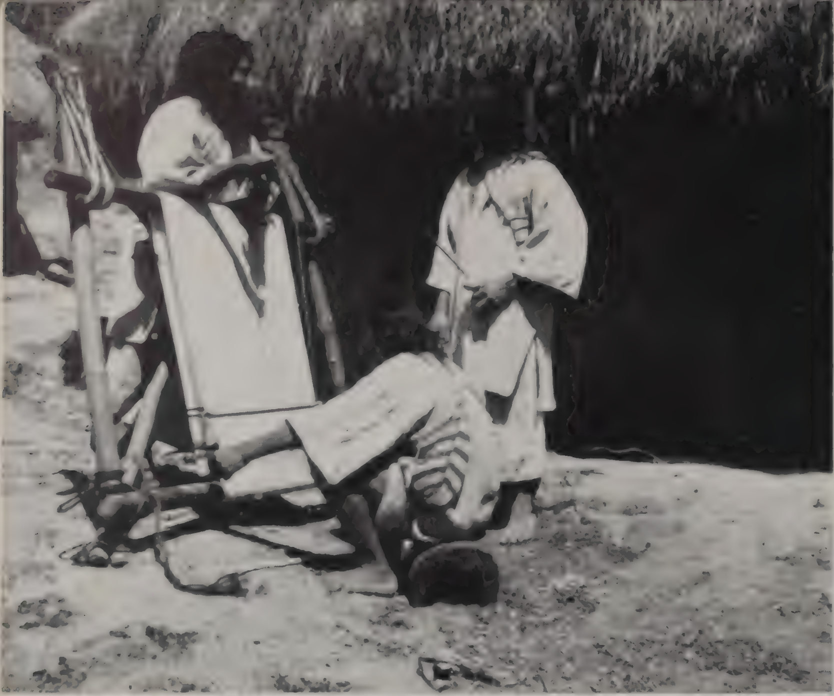


Plate 179.—**Cágaba trails and structures.** *Top:* Bridge at San Miguel. *Bottom:* Gateway to San Miguel. (Courtesy Willard Z. Park.)



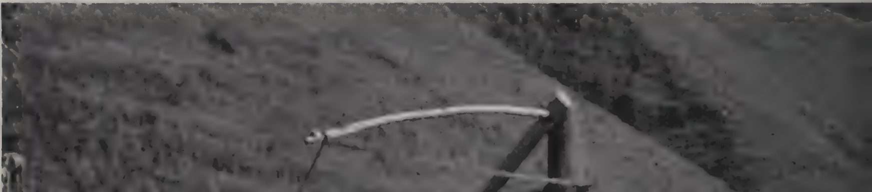


PLATE 180.—**Cágaba industries at San Miguel.** *Top:* Weaving. *Bottom:* Sugar-cane mill. (Courtesy Willard Z. Park.)

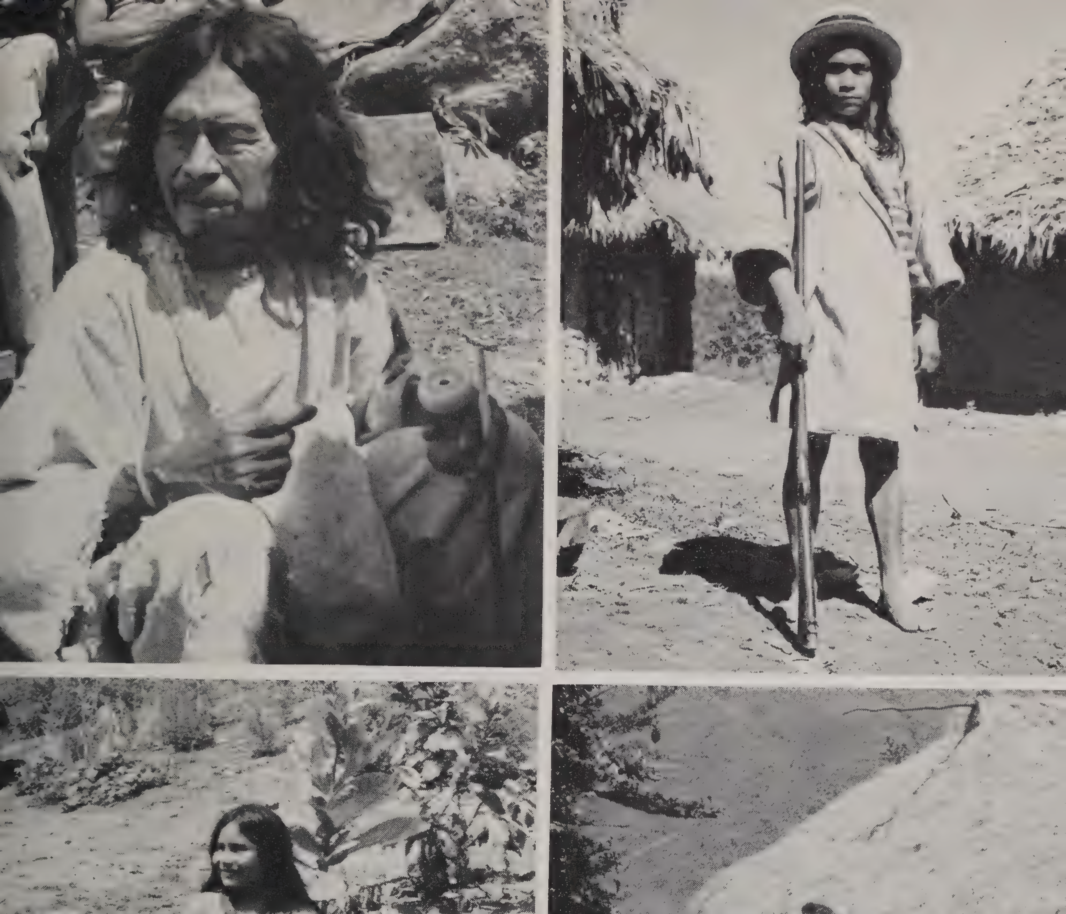


PLATE 181.—**Cágaba and Ica types.** *Top* (*left*): Priest at San Miguel taking coca. The gourd contains lime. *Top* (*right*): Young man of San Andrés who had visited Barranquilla. *Bottom* (*left*): Young bride, San Miguel. *Bottom* (*right*): *Ica* woman dressed in trade cloth. (Courtesy Willard Z. Park.)

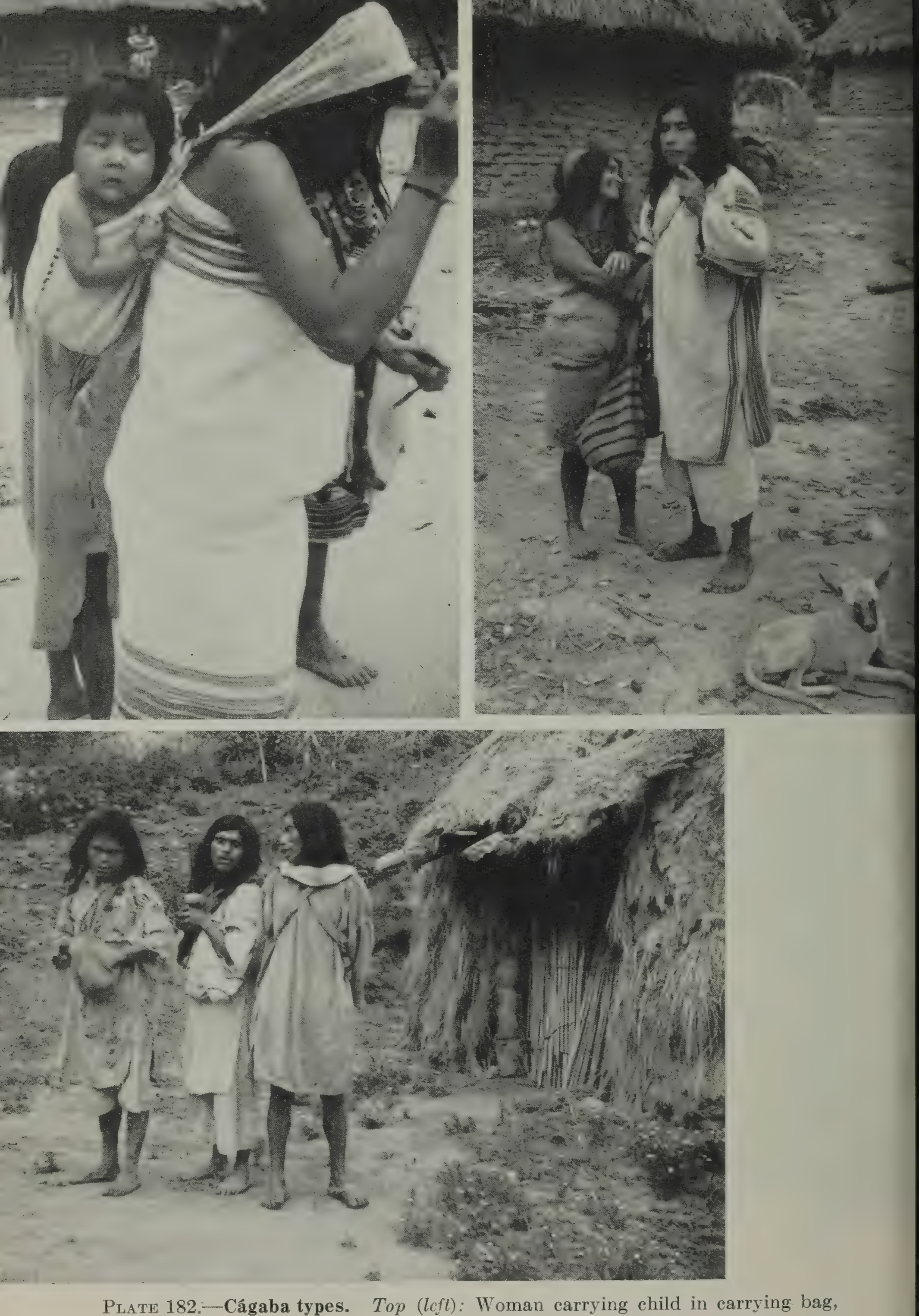
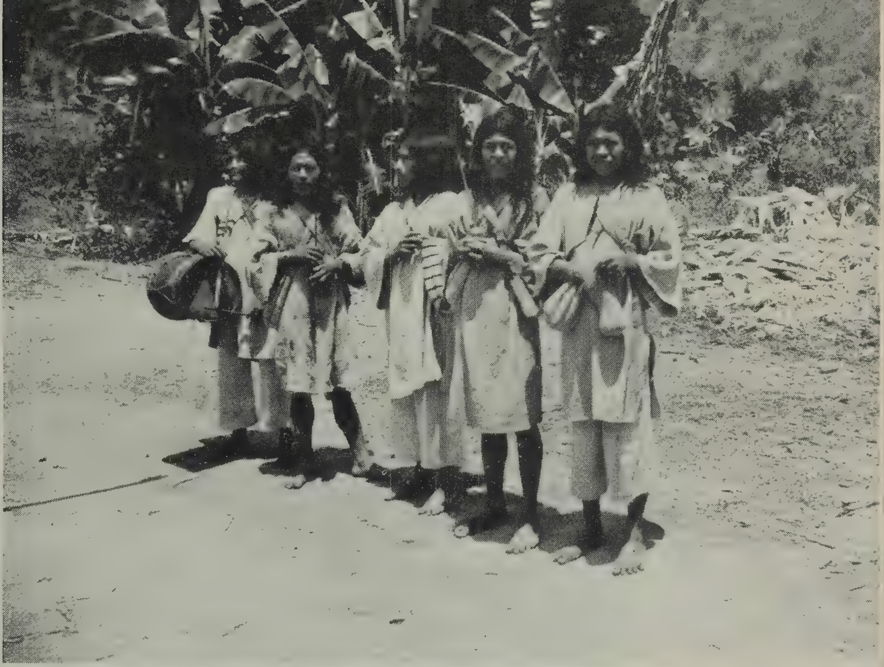


Plate 182.—**Cágaba types.** *Top (left):* Woman carrying child in carrying bag, while drumming for women dancing. *Top (right):* Indians returning from a celebration at San José. *Bottom:* Indians at Mocastama village, site of the most sacred casamaria. (Courtesy Willard Z. Park.)



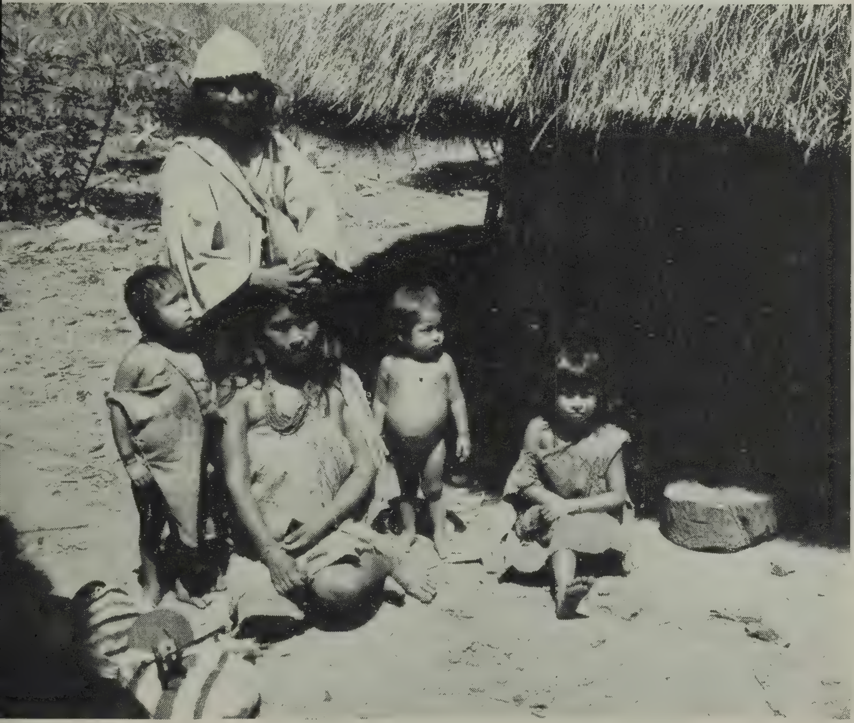


PLATE 183.—**Cágaba types.** *Top:* San Miguel men with typical hairdress. The village chief is in the center. Each man carries two coca bags. Two men have their trousers rolled up. *Bottom:* Family group. The man wears a typical *Cágaba* hat. (Courtesy Willard Z. Park.)

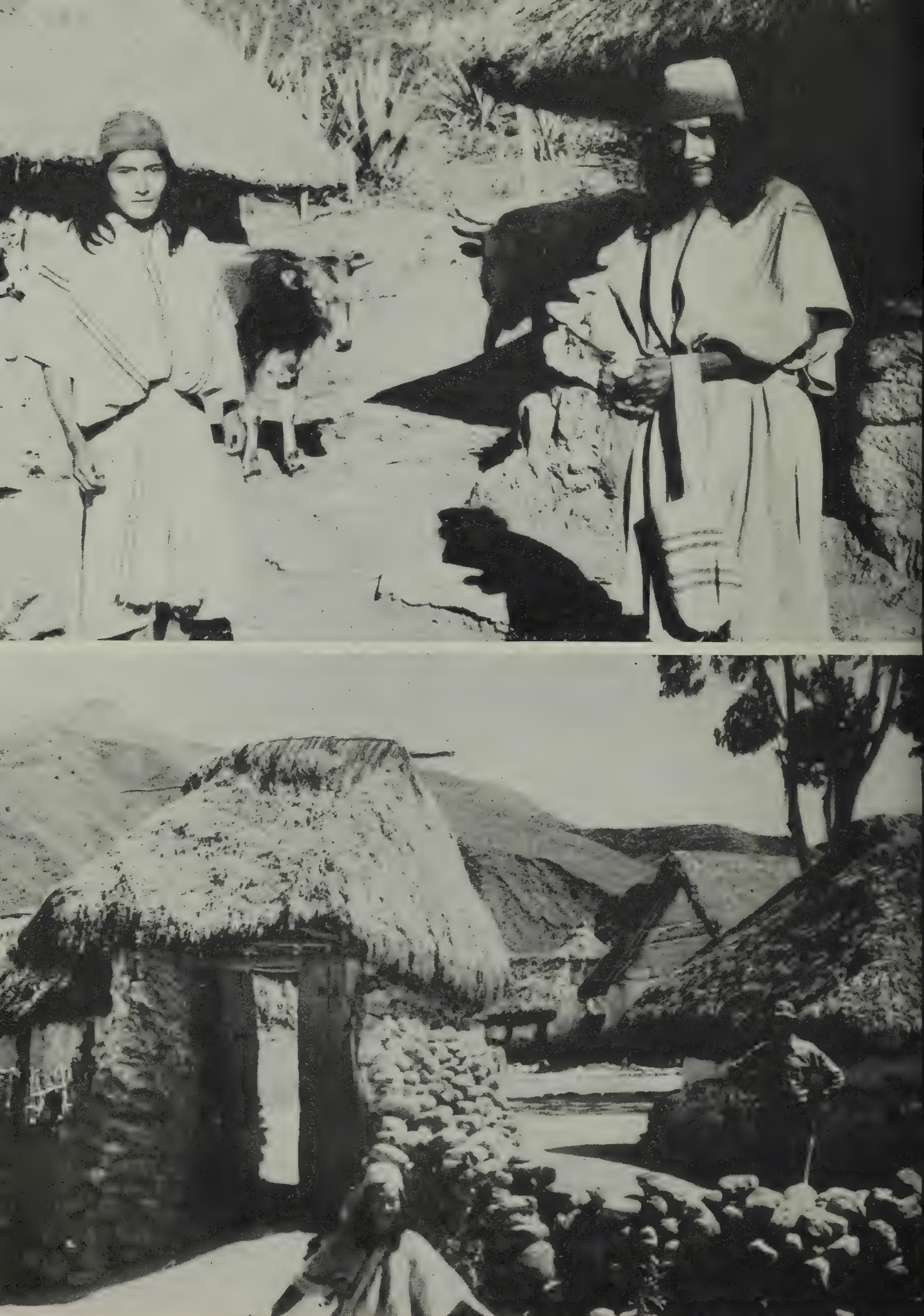


PLATE 184.—**Ica Indians.** *Top:* The *Ica* cap differs from that of the *Cágaba.* *Bottom:* Western gate of San Sebastian. (Courtesy Thomas D. Cabot.)

above and below San Miguel may have been house sites and patches of coca vines. Both the *Ica* and the *Cágaba* terrace with undressed stones to provide level ground for the coca cultivation. Other fields and gardens are not terraced.

The abandoned terraces do not necessarily indicate a greater population in the past. Family dwellings are frequently moved because of soil exhaustion. Village sites are also changed from time to time, as is witnessed by the destruction of San Antonio, between Pueblo Viejo and San Francisco, at the turn of the century because of conflict with non-Indians and the shifting in 1936 of San José a scant quarter of a mile at the command of the priest, who regarded the move as a means of putting an end to an unidentified epidemic.

DRESS AND ORNAMENTS

The clothing of the people of the mountains is of cotton, consisting for the men of a long-sleeved gown or dresslike garment falling from the shoulders to the knees and a pair of tight-fitting trousers (pls. 181, 182, 183, 184). It is probable that the latter were introduced by the Spaniards and that the long upper garment more nearly resembles the pre-Columbian clothing. Men wear over the shoulders one or more cotton bags, or mochilas, in which the lime gourd (poporo), coca leaves, and other personal possessions are carried. A hat, sometimes a woven headband, is worn by the men. The *Cágaba* hats, small and running to a point on top, are always made of cotton. The larger flat-topped *Ica* hats are made either of cotton or of agave fiber. The *Cágaba* hat may be decorated with a solid purple stripe; the *Ica* hat sometimes has a narrow brown line.

Women wear a single-piece dress fastened over one shoulder with the other shoulder bare. The dress is gathered at the waist with a wide cotton belt. Women do not wear hats.

Women usually carry mochilas only when transporting burdens; then, only the mochila made from agave fiber is used.

Neither men nor women among the *Cágaba* wear foot covering. *Ica* are sometimes seen with cowhide sandals.

Painting of the face and body, scarification, and tattooing have not been reported from the tribes of the Sierra Nevada. Some of the earlier sources mention the *Chimila* and other lowland tribes covering the body with clay as a protection against insects and painting faces and bodies before going into battle.

The men of the mountain tribes wear bright-colored cotton mochilas on festival occasions. The number a man wears is an indication of his wealth and the industry of his wives.

All individuals from birth onward wear several strands of cotton around each wrist; two or three small beads are threaded on each cotton string. These amulets are intended to provide protection against sickness.

Women wear as many strands of beads around the neck as they can accumulate. Blue-glass trade beads are popular, but the tubular carnelian beads found in *Tairona* graves and procured in trade by the Sierra tribes are particularly prized. Women with wealthy husbands or with wealth in their own right may accumulate as many as 20 to 30 strings of beads. These are worn only on festival or ceremonial occasions.

Children are dressed like their parents, except that a boy is not given trousers until he is nearly mature. All children are clothed at an early age.

Both men and women wear their hair long and loose. Combs are known but usually the fingers suffice to untangle and arrange the hair. Some men wear a sparse growth of hair on the face.

Men and women are extremely modest about exposing their bodies. Men refuse to bathe in the presence of others, including males.

Both sexes bathe frequently in the rivers. Each individual usually takes at least two hasty dips each day. Clothes are not frequently washed and then only in cold water.

TRANSPORTATION

Transportation is principally on the backs of human beings. Many different sizes of mochilas are available for carrying burdens. Women carry all burdens on the back with the strap of the mochila over the forehead. Men always have the strap over the shoulder, often carrying several mochilas in this fashion with the sack resting on the back.

Oxen are not heavily burdened, although pack saddles and large mochilas for packing animals are in evidence. Frequently, families on the move will be encountered on the trail leading an ox equipped with a pack saddle but only burdened with a small mochila of vegetables. The women of the family will, however, be carrying mochilas with loads several times greater. Oxen are used to supply the power for the trapichi, the cane mill with three heavy wooden cylinders.

Riding of animals is not customary among the Indians, although they are familiar with the practice.

MANUFACTURES

Basketry.—Little basketry is made in the Sierra Nevada. Plaited fire fans are found in every household, and boxlike containers in two parts, one fitting into the other, are used, principally by the priests (mamas) to store personal possessions and religious paraphernalia. The *Cágaba* and *Ica* women also use plaited mats for sleeping (Bolinder, 1925, pp. 65–66, pl. 15, 16).

Textiles.—Cotton and agave provide the principal textile fibers (pl. 180, *top*). Since the introduction of sheep, some wool is used in making mochilas but not clothing.

Men spin the cotton yarn with a simple spindle with a stone or clay whorl. This work is done in the temple. Men also weave the cloth on a large upright loom. (See Bolinder, 1925, pls. 23, 29, 33.) Some yarn is dyed a deep purple with vegetable dye and used to border the cloth that is made into clothing for both men and women. Men also spin the cotton yarn used by the women in making mochilas.

The women sew the mochilas (*Cágaba*: gamá) with agave fiber or cotton. Formerly, needles made from wood of the macana tree were used, but now these have been replaced by large steel needles obtained from the traders. Yarn for the cotton mochilas with geometric designs is bought already dyed from traders. For other mochilas, cotton and agave fiber are treated with vegetable dyes.

Women spin the agave string for mochilas and cordage. For this purpose a bow-driven spindle, the carumba, is used. This spindle has a large wooden disk for a whorl (Bolinder, 1925, p. 69, pl. 22, No. 4; Brettes, 1903, fig. 40). A knotless netting technique is employed in sewing all mochilas regardless of the size, material, or texture (Bolinder, 1925, pl. 29). Women make mochilas whenever their hands are not engaged in other activities. Frequently, they are seen walking rapidly along the trails carrying heavy burdens and at the same time working on a mochila.

Skin work.—The *Ica* use skins somewhat more than other tribes of the Sierra Nevada, but work in this material is unimportant throughout the mountain regions (Bolinder, 1925, p. 63). Tanning is unknown.

Ceramics.—Some pottery is made by the *Cágaba* and *Ica*, but among the latter the art has largely disappeared. For the most part, the ware is simple, undecorated, and without a glaze. Among the *Cágaba*, men make the pottery in the temple and fire it on the hillside with wood. Vessels are used for cooking, to ferment the alcoholic beverage, and to toast coca leaves. Large iron pots are used to boil the sugarcane juice for panela. Only the *Ica* priests make pottery, and the vessels are used exclusively in religious ceremonies (Bolinder, 1925, p. 65).

Gourds.—Gourds are used as water jugs and as food bowls. Gourd vessels are usually undecorated, but occasionally crude geometric designs are incised on the outer surface. Small gourds are used as lime containers (poporo) (pl. 181, *top*, *left*) and tobacco receptacles (ambil), but these are not decorated.

Woodwork.—Little work in wood is evident in modern times. Shovel-shaped scrapers for cleaning agave fibers, weaving implements, combs, and bows are made from the highly prized macana wood. Drums, fermenting vessels, platters, and spoons are also made of wood.

Fire making.—Fire is made infrequently; a simple drill and hearth is used (Brettes, 1903, fig. 31). Usually, fires are started with brands borrowed from another house or preserved on the trail with a slow burning brand.

SOCIAL ORGANIZATION

The basis of the society is the bilateral family composed of parents and unmarried children. Outside of this group the principal source of social authority is the priest (mama). In recent generations, Spanish names are used and particular names are associated with certain villages. In addition, Indian names are given at birth, but apparently these names are not connected with family lines.

When a boy comes of marriageable age and selects a prospective mate, he makes his choice known to the priest (mama). At a discussion of the priest and elders in the temple, the suitability of the marriage is determined. This largely rests on whether the two are related. If no relationship comes to light and the girl's father approves, the boy enters upon a year's service to the prospective bride's parents, carrying wood and assisting in the cultivation of their garden. During this period, the couple does not have sexual relations. At the end of the year, if the service proves satisfactory, a small hut is built near the village, the bride is provided by the priest with small bundles of maize husks containing charm stones, and the couple repairs to the hut for 2 nights. Among the *Ica*, the couple is attended by an assistant to the priest, who is present during the first intercourse, and the bride must place one of the charm stones under her anus during the act in order to ward off the potentially evil spirits. After 2 nights, the couple returns to the priest, who delivers a lecture on their duties as husband and wife. Thereafter, intercourse must take place outside the house, preferably in the cultivated fields. A child conceived as the result of intercourse indoors will be either blind or lazy.

After the ceremony, the couple takes up residence apart from the parents, but they are regarded as belonging to the wife's village.

Polygyny occurs but is not common. Usually only a priest or a wealthy man will have plural wives. Additional wives are most frequently acquired from the ranks of the widows. There is no indication that the sororate and levirate operate in this region.

The priest (mama) exercises the principal authority (pl. 181, *top, left*), although under Spanish influence each village has a secular headman or commissioner. The latter, however, refers important questions to the priest for final decision. The headman of the village usually serves for 1 or 2 years to be succeeded by another wealthy or influential individual.

Social sanctions against stealing and violence toward others are particularly strong. As the result of Spanish influence, offenders are locked in stocks (cepo) in a dark hut. Confession and such penance as spinning yarn in a darkened room are also exacted. Offenses involving theft and violence appear to be extremely rare, and the *Cágaba* in particular exhibit a deep-rooted aversion to these forms of behavior.

Women may own and inherit secular property, but only men who are novices or trained priests may succeed to the possession of a temple, its masks, and other sacred paraphernalia. Women inherit lands, houses, and livestock from husbands and fathers.

Widows may remarry and retain rights to property inherited from the deceased husband. If a widow is too old for marriage, she may attach herself to the household of a wealthy man, where she assists the other women.

LIFE CYCLE

Birth.—Birth takes place usually in a small hut especially constructed for the occasion. An experienced woman is in attendance, and a priest is at hand with charm stones and incantations. The baby is bathed shortly after birth and again 9 days later, when both the mother and child go to the river. The mother remains in seclusion for 9 days, during which time she may eat no salt. At the end of the period of seclusion, the priest confers a name on the child and the mother resumes her normal life.

Girls' puberty.—At the onset of the first menstruation, a girl is secluded in the regular dwelling house for 9 days, during which time no salt can be eaten and certain foods are prohibited. Formerly, at the end of the period of seclusion, *Cágaba* and *Ica* girls were initiated into the sexual act by older, experienced men. It is said that this practice is no longer followed. Seclusion at subsequent menstruations is not required, and apparently no particular restrictions are placed on the menstruating women.

Boys' puberty.—Boys are given a lime container (poporo) at puberty and initiated into the sexual act by older women, usually widows. No other observation of boys' passage into manhood has been reported.

Death observances.—At death, the *Cágaba* prepare the corpse for burial by flexing it. The body is placed in the grave with the deceased's personal possessions and a container of food. A string is attached to the septum of the nose and extended to the surface of the grave. This is said to permit the soul of the deceased to escape. The *Ica* bury only the priests in a flexed position. The spouse mourns for 9 days, but remarriage is not permitted until 9 months have passed. There is a mourning ceremony, the principal purpose of which is said to be to prevail upon the soul of the deceased to proceed without delay to the afterworld. The ceremony consists of the priests' burning maize husks and cotton thread and reciting incantations.

RECREATIONAL ACTIVITIES

Games.—Games are unknown to the Indians of the Sierra Nevada. Organized community activities center around work gangs to build and repair bridges, trails, and houses, or to conduct communal drinking bouts. Even children do not have games, but eagerly and enthusiastically participate in the activities of the adults. The principal toy is the bow, but this is employed in hunting birds.

Gambling has not been reported for the tribes of this region.

Dances.—Dances are for the most part religious, but some dancing has come to have a place in the purely secular community drinking sprees. Dancing on these occasions is similar to the ceremonial dances. Men and women dance separately, but men play the flutes for the women's dances.

Musical instruments.—Musical instruments include drums, flutes, trumpets, and rattles. For secular dancing, men use a drum with two membranes patterned on the European instrument. For religious rites, a large wooden drum, composed of an upright cylinder with a single membrane, is used. Gourd rattles are suspended from the last pegs holding the membrane. (See Preuss, 1919–26, fig. 18, and Bolinder, 1925, pl. 24.)

Flutes made of cane are used in pairs, one with five spaced holes (the female) and the other with a single hole (the male), by the musician who uses the gourd rattle. The mouthpiece is of beeswax shaped to resemble a bird. The reed is made from the quill of a turkey feather.

Trumpets are made from long-necked gourds.

Women use a small single-headed drum with the membrane held taut by pegs on the side of the cylinder. This type as well as the upright cansamaria drum with suspended rattles bears strong resemblance to West African instruments.

Narcotics.—Coca chewed with lime is the principal narcotic. Men carry toasted coca leaves in a small bag (mochila), and the lime container (poporo) is a small symmetrical gourd with a short neck. A stick carried in the poporo is used to put a small quantity of lime in the mouth. The stick is then rubbed on the neck of the gourd, building in time a thick rim around the top of the poporo. Men chew coca continuously during waking hours.

Tobacco is used only by boiling the leaves down into a black sticky substance which is carried in a small tube-shaped gourd with another gourd (ambil) of approximately the same size fitted over the end as a cover. Tobacco in this form is rubbed on the gums while chewing coca. Women use neither coca nor tobacco.

Intoxicants.—Cane juice, yuca, maize, and one variety of agave are fermented and consumed in quantities when the community assembles for a festival. Formerly, the drinking of intoxicating beverages was confined largely to religious rites, but now secular festivals afford the occasion for more frequent community drinking bouts.

The *Cágaba* now make intoxicants only from cane juice; the *Ica* use yuca, agave, and maize. The preparation, as the drinking, of the fermented beverage is a community undertaking. Women and children participate in both phases of the activity.

RELIGION

The religion of the Sierra Nevada is the most complex feature of the culture. There is evidence that the religious beliefs and practices of the mountain people were heavily influenced by the *Tairona*. A relationship between Sierra and *Tairona* religion is indicated in part by the *Cágaba* priests' use of *Tairona* words, by similarities in training of novices, and by references to the *Tairona* as people with secret knowledge, songs, and magic, and as Godlike people, characteristics which are also ascribed to *Cágaba* priests (Preuss, 1919–26, p. 40 ff.).

Cágaba religious beliefs are concerned principally with spirits that are often malignant and with ancestors, particularly the ancestors of the priests (mamas). The chief figure is Gauteovan[12], the mother of all things. She created the sun out of her menstrual blood, and she brought into existence the demons who cause illness.

The supernatural, the secret powers of man and nature, and the magical powers of the ancestors, as well as thought, intention, will, and feeling, are designated by the term "aluna."

The esoteric knowledge of the priests, particularly the songs which are inseparable from the dance, is the principal means of influencing the supernatural, including the demons who cause sickness, misfortune, and death. In these efforts the priests are aided by the use of masks that are the faces of the spirits and the demons.

In order to secure the knowledge and magical power to control supernatural forces, the priest must undergo 9 years of training as a novice. Sons of priests or other likely candidates are chosen, the latter being adopted as sons. During the period of training, the novice must not eat salt and must forego many foods, particularly those introduced in the period of Spanish influence. In addition to acquiring a knowledge of the priestly lore and sacred rituals, the novice must serve the priest, working in his gardens, carrying wood, and weaving cloth. Only after he becomes a priest is he permitted to marry.

The priests not only practice the rites that ward off disease, cure the sick, control the weather, and assist the souls on their way to the afterworld, but also they possess a knowledge of the herbs and roots that are used in curing many forms of sickness.

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[12] Known by many variants of this name, but this form seems to be used more widely.

The principal religious ceremonies are connected with changes in the seasons.[13] The March ceremony at Palomino is to ask protection of the sun against sickness during the coming rainy season; the September rites are to bring rain in order to moderate the dry season and in every way to insure an abundance of food.

The religion of the *Ica* is apparently similar in broad outline to that of the *Cágaba*, but some of the more elaborate features of *Cágaba* practice and belief seem absent. In both cases, the influence of Christian beliefs and practices is clearly evident. The importance of confession and penance as means of absolving the sinner, the conflict of good and evil in the spirit world and in the afterworld of the dead, and many other indications of Christian influence point to significant modifications in the content of belief and practice.

MYTHOLOGY

Extensive collections of the myths of the Sierra Nevada remain to be made. The material recorded by Preuss (1919–26, p. 133 ff.), however, suggests that the *Cágaba* tales deal largely with religious affairs. The supernatural beings, the arrangement of the world, the control of the demons, the ancestors of the priests and their conflicts with the malignant demons, and the songs and dances conferred on the priests are themes that stand out in the myths. Whether purely secular tales dealing with other themes are current should be determined.

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[13] See Preuss, 1919–26, p. 106 ff., for a full account of the important rites.

THE CHIBCHA

By A. L. Kroeber

INTRODUCTION

The *Chibcha* culture is one of the most famous in South America (map 1, *No. 23*; map 7). In fact, it is often spoken of as representing one of the culminations of native civilization in the Americas, equal to, or only just behind, that of the *Aztec-Maya* and *Inca.* But the *Chibcha* left no historic impress, no persisting influence on the modern life in their former area. They have also left surprisingly few physical monuments; their archeology is meager. Even their speech died out long ago. It is clear that they achieved much less of a cultural construct in their day than Mexicans or Peruvians. Why then do they stand out in our consciousness?

The primary reason seems to be that they achieved states. They were in a fair way to attaining to political structures of type similar at least to that of the *Aztec,* if not the *Inca.* Considerable masses of men had come under the control of individuals, so that they moved, in peace and at war, with direction, and at any rate with the possibility of consecutive development. That there were several such states, and that these were still contending, does not reduce the situation materially below the level of conditions in the *Aztec* area: not by more than a generation or two. The *Chibcha* had definitely passed out of the amorphous, endlessly reshifting status of mere tribal life, which seems to us so essentially historyless in its potentialities. It is true that they possessed very little history, as yet, when the Spaniards broke them. But the same might be said, with only relative qualification, of the Peruvians.

To what this political development was due, which in Colombia was so highly localized among the *Chibcha,* is not wholly clear. The most nearly satisfying explanation, probably, is in terms of a population of superior density, due in turn to a favorable terrain: an altitude sufficient to temper the climate of the Tropics, a series of good-sized valleys with much level land, a fertile soil, and a grass savannah interspersed with enough larger vegetation to take it out of the type of mere semiarid plains. Not that these geographical conditions will of themselves produce political organization; but a natural environment more or less favorable to concentration of numbers does seem a necessary requisite for political development to spring up spontaneously, without import. The *Chibcha* habitat is, therefore, of significance to an understanding of *Chibcha* culture.

With all their differentiation from their nearer tribal neighbors on the political side, the *Chibcha* were, however, surprisingly on their level in other ways. This is true of success in warfare, trade relations and dependences, religious concepts and practices, and manual industries. They evolved no calendar, no astronomy, no elaborate system of cults comparable to those of southern Mexico and Guatemala. It was organization which they lacked in all these domains, along with their politically unorganized Colombian neighbors. They failed to develop cultural forms which were at once definite and interrelated into something larger. Take away from the *Aztec* their religious system and all that adhered to it, and the picture would be not so very different.

However, the Mexican religion also rested on a wealth of material symbolic expressions, without which it would appear to us far less choate and effectively organized. These Mexican expressions are largely through art; and the art, in turn, rests upon a skilled, advanced technology in many media. Technology of this proficiency the *Chibcha* were very far from having attained; without it, their art remained backward; and without the art, their religion, with which in native America intellectual development was intimately associated, remained on an essential par with that of their tribally cultured neighbors. The *Chibcha* did not build in stone, were virtually sculptureless, some of their best cloth was painted instead of patterned, and their metalwork and ceramics are recognized as inferior to those of other areas of Colombia whose inhabitants were historically so obscure as to be hardly remembered.

The Peruvians equaled and in some respects surpassed the Mexicans in technology. They were perceptibly behind them in esthetic and symbolic expression, and still more so in religious and intellectual articulation. They had moved one or more steps beyond them in political integration. It is on these inequalities that the often-made comparison rests, of Mexicans to Greeks and of Peruvians to Romans; and in part the other saying, that the Mexicans achieved best with their minds, the Peruvians with their hands. Compared with both, the ancient Colombians were well behind in all aspects; and from the general mass of the Colombians, the *Chibcha* stood out, primarily, in sociopolitical development alone.

It is in the light of these generic characteristics that *Chibcha* culture will now be examined in more detail.

HABITAT AND POLITICAL DIVISIONS

The core of *Chibcha* territory is the upper drainage of two eastern affluents of the Magdalena, the Bogotá and the Sogamoso, or Chicamocha, Rivers. These head together and flow in opposite directions between branches of the fourth, or easternmost, Cordillera. The Funza-Bogotá River runs south-southwest and southwest, its lower course, beyond the falls of Tequendama, being in *Panche* instead of *Chibcha* possession. The Chicamocha runs north-northeast, then due east, then successively north, northwest, and west, until, uniting with the north-flowing Suárez River, it passes out of *Chibcha* territory on its northwest way into the Magdalena River.

In the upper valleys of these two rivers were the capitals and sacred sites of the leading *Chibcha* states (map 9). The southern and larger of these states was ruled by the Zipa, the northern by the Zaque. (Sipa and Sake would be the orthographic as against the Spanish rendition.) Beyond the Zaque's realm was a smaller one, that of the Iraca, who is sometimes reported as having been a high-priest rather than as a ruler.

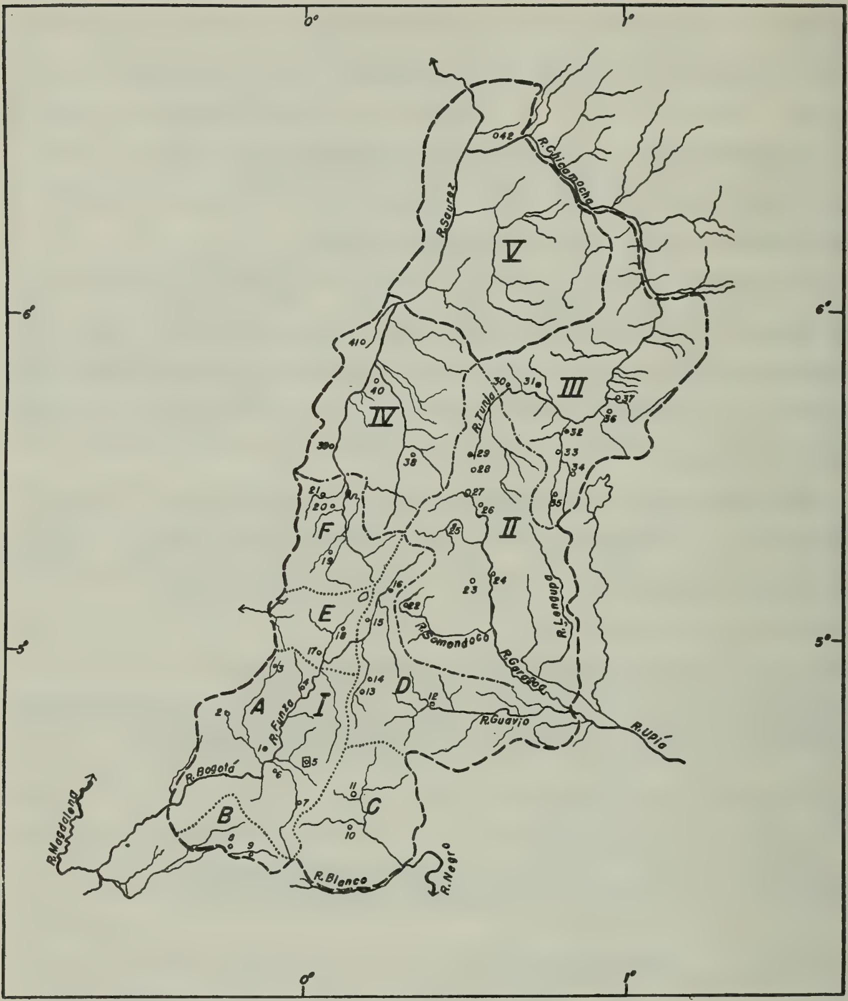
The leading population centers also seem to have been situated in the same two drainages, mostly at an elevation of 2,600 to 2,700 m. (about 8,500 to 8,800 ft.), and rarely varying more than 300 feet (100 m.) from this range. Thus, ascending the Bogotá:

Soacha, 2,520 m. (8,267 ft.).
Bosa and Usme, probably higher, up a southern tributary.
Modern Bogotá, ancient Teusaquillo, 2,640 m. (8,661 ft.).
Old Bacatá or Muequetá, across the river, about the same elevation; now Funza.
Facatativá, 2,641 m. (8,664 ft.), on a tributary from the west.
Funza, 2,600 m. (8,530 ft.).
Zipaquirá, 2,628 m. (8,622 ft.).
Sesquilé, 2,640 m. (8,661 ft.).
Suesca, 2,640 m. (8,661 ft.).
Guatavita, 2,620 m. (8,595 ft.), up a tributary from the south.
Guasca, 2,721 m. (8,927 ft.), higher up the same.
Chocontá, 2,685 m. (8,809 ft.).

Descending the Chicamocha:

Hunsa, modern Tunja, 2,820 m. (9,252 ft.), the highest important town.
Sugamuxi, modern Sogamoso, 2,536 m. (8,320 ft.).

It is clear that this 2,500 to 2,800 m. (about 8,200 to 9,200 ft.) altitude was the optimum for population density in the *Chibcha* area. The specific causes of this elevation being optimum appear not to have been determined, but they are evidently associated with a bountiful yield of crops, especially maize. The reasons may have been cool temperature around lat. 5° N., a favorable combination of precipitation and insolation, level and fertile terrain due to former lake basins. The Spaniards spoke of sabanas, but the natural vegetation evidently was more varied than mere grass or grass-and-scrub land. At slightly higher altitudes, not far from 3,000 m. (about 9,800 ft.) on the average, páramos begin, and potatoes yield better than maize. At lower altitudes than the *Chibcha* optimum, the climate begins to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R. Chicamocha
R. Tunja
R. Lengupa
R. Somondoco
R. Garagoa
R. Guavio
R. Upía
R. Funza
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R. Magdalena
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Map 9.—*Chibcha* territory. (After Restrepo, 1895, and Triana, 1907.) Broken line, limits of *Chibcha* territory. Dot-and-dash line, roman numerals, major realms: Zipa, Zaque, etc. Dotted lines, capital letters, provinces with overlords. Arabic numerals, settlements. All limits are approximate only.

I. Zipa's dominions. A, Bacatá: 1, Muequetá; 2, Facatativá; 3, Subachoque; 4, Chia; 5, Teusaquiyo, modern Bogotá; 6, Bosa; 7, Usme. B, Fusagasugá: 8, Fusagasugá; 9, Pasca. C, Ubaque: 10, Cáqueza; 11, Ubaque. D, Guatabita: 12, Gachetá; 13, Guasca; 14, Guatabita; 15, Suesca; 16, Chocontá. E, Zipaquirá: 17, Zipaquirá; 18, Nemocón. F, (Ubaté): 19, Ebaté; 20, Susa; 21, Simijaca.

II. Zaque's dominions: 22, Machetá; 23, Tenza; 24, Garagoa; 25, Turmequé; 26, Ramiriquí; 26, 27, Boyacá; 28, Soracá; 29, Hunsa (Tunja).

III. Tundama, Iraca: 30, Paipa; 31, Tundama; 32, Sugamuxi, Sogamoso; 33, Firavitoba; 34, Iza; 35, Pasca; 36, Topaga; 37, Gámeza.

IV: 38, Sáchica; 39, Saboyá; 40, Moniquirá; 41, Chipatá.

V: 42, Guane-ntá.

be tropical, and cultivation is increasingly one of hill slopes or stream gorges.

However, not over a third of *Chibcha* land was comprised in these two favored drainages. Nearly half of the Zipa's domains, and much the greater part of the Zaque's, lay outside. Much of this outside territory had somewhat lower elevation.

The Zipa realm was reckoned as consisting of six political districts or principalities, each under a native chief confirmed by the Zipa, or a relative installed by him. Of these six districts, only two and a half lay in Bogotá River valley: Bacatá-Muequetá, Zipaquira, and the western part of Guatavita. The remainder of Guatavita was drained by the Guavio River, which flows into the Upia River and, as the Upia into the Meta River, and is thus in Orinoco instead of Magdalena drainage. In this area Gachetá lies at only 1,800 m. (5,905 ft.). To the south of Guatavita, the principality of Ubaque, with Choachi, Ubaque, and Cáqueza at respectively 1,910, 1,870, and 1,750 m. (6,266, 6,135, and 5,741 ft.) elevations, was in the drainage of the Río Blanco, which becomes the Río Negro, and ends as a southern affluent of the Meta River. West of Ubaque and south of Bacatá was the small district of Fusagasugá, 1,750 m. (5,741 ft.) elevation, on a river of the same name which enters the Magdalena River, but directly, a short distance south of the Bogotá. Finally, in the northwest corner of the Zipa dominions was Ubaté, 2,600 m. (8,530 ft.) elevation, on the headwaters of the Suárez, which flows due north, parallel with the Magdalena River, to join the Chicamocha River. With the exception of this small district, all those not draining into the Bogotá lie 600 m. (about 2,000 ft.) and more lower, or at around 6,000 feet (1,800 m.) instead of above 8,000 (about 2,400 m.).

The Zaque's domain did not extend far down the Chicamocha River, because independent Tundama and Sugamuxi, on the north and south respectively of that river, were only some 40 or so km. (perhaps 25 mi.) distant from the capital Hunsa (Tunja). The main territory subordinate to the Zaque was in Upía-Meta-Orinoco drainage, southeastward from Hunsa. The Boyacá-Bata-Garagoa River, an affluent of this system, in fact rises between the Chicamocha and the Bogotá Rivers, whose heads are separated by a very few leagues, say 15 km. (9 mi.). In this captured wedge was Boyacá, just south of Hunsa; downstream were Ramiriquí, 2,435 m. (7,988 ft.) elevation, and Turmequé, 2,404 m. (7,887 ft.) elevation. On an affluent from the west was Machetá, not more than 10 km. (6 mi.) from Chocontá on the Bogotá River, but 520 m. (1,706 ft.) lower, at 2,165 m. (7,103 ft.) as against 2,685 m. (8,809 ft.) elevation.

This spot, Boyacá—famous also for Bolivar's victory of 1819—at the head of an Orinoco tributary, and between the sources of the Bogotá and Chicamocha Rivers, which traverse the *Chibcha* "crown-lands" on their opposite ways into the Magdalena River—and just over a watershed also from a tributary of the Suárez River—this Boyacá lies in the very geographical center of the total *Chibca* habitat, and thus typifies *Chibcha* land occupation and organization. This occupation was in terms of radiating drainages—radiating not from a great massif or Cordilleran knot, but from an inconspicuous point slightly higher than the favored cool uplands. The *Chibcha* habitat is not a bowl, as might be anticipated from its lying between branches of the inner Cordillera, but a convexity. It slopes at first gently away on all sides, down to about 2,500 m. (about 8,200 ft.), which was the occupation level at which the *Chibcha* were most successful, and then to about 6,000 feet (1,800 m.); beyond which their utilization of the terrain was peripheral, atypical, and never of prime political importance.

This fading out is particularly visible in the northern third of the territory ascribed to the *Chibcha.* In the northeast, Sugamuxi-Sogamoso is treated in the accounts as if it had been a respected sort of Lepidus in the triumvirate with Zaque and Zipa. Just north of it was Tundama, a separate "realm," but little mentioned except for a flare-up of belated resistance to the Spaniards. Beyond, on the lower Chicamocha River and stretching across to the lower Suárez River was Guane or were the *Guane*, with the Guanentá as lord, who are heard of even less. By some, the *Guane* were not included among the *Chibcha.* On the middle Suárez River, between Guane and Zipa's Ubate, were several minor "independent" principalities or tribes.

The total length of ascribed *Chibcha* territory, from a little north of lat. 4° N. to a little south of lat. 7° N., was about 270 km. (170 miles), with an extreme breadth, from sierra to sierra, of perhaps 140 km. (85 mi.). The focal region of Zipa, Zaque, and Iraca stretched northeastward from somewhat below Bogotá to a little beyond Sogamoso, all within 200 km. (about 125 mi.). This focal area may have comprised some 15,000 $km.^2$ (under 6,000 sq. mi.), as against less than double that in the total range.

POPULATION

What the population may have been is difficult to estimate. Spanish accounts have the Zipa and Zaque fight each other with armies of 50,000 men, but again give the Zipa only 600 picked warriors in his first attack on Quesada's 166 conquistadors. If we allow 100 inhabitants to the square mile—a fairly dense population without cities— or 40 to the square kilometer, which seems a reasonably liberal average for the overall of the range, we come to a million *Chibcha*, which is perhaps the usual estimate. This gives each person about 6 acres, or 2 to 3 hectares, including mountains, hill slopes, forest, swamp, lakes, and other nonagricultural land.

The census of 1919 showed 1,103,000 inhabitants in the Departments of Cundinamarca and Boyacá, corresponding to ancient *Chibcha* land. Subtraction of 120,000 in Bogotá, the capital of the present nation, leaves about a million. This modern figure suggests that the equivalent estimate for native times may be too high rather than too low. Four centuries of peace, with improved transportation and the introduction of livestock, would presumably favor population growth.

Triana has compiled the distribution of the 1919 population in the territory of the native caciqueships. In round numbers, they run as follows: Zipa dominions, without modern Bogotá, and excluding Guatavita, 300,000; Zaque, 240,000; Tundama and Iraca, 175,000; Ubate, etc., on Suárez, 135,000; Guatavita, 125,000. The population still being prevailingly agricultural, it is likely that these figures fairly represent the relative strength of the several realms.

NEIGHBORING TRIBES

Chibcha relations with most of their neighbors were reasonably amicable. The exceptions were two tribes of *Paniquitan* family to the west and southwest, the *Muzo* or *Colima* and the *Panche.* These inhabited the slope between the Magdalena River and the western chain of the Eastern Cordillera. In this hill-slope country there was little opportunity for concentrations of population, and the *Muzo* and *Panche* lived tribally, scattered in small settlements, like most of the Colombians in a hot climate. They fought both the *Chibcha* and each other, and resisted the Spaniards vigorously. In fact, the Spaniards had more trouble with them than with the savannah-dwelling *Chibcha,* whose power was generally broken with their rulers. The *Panche* and *Muzo* went naked, even the women, deformed their heads, had no temples (adoratorios), and were governed by chiefs or elders instead of despotic rulers. They were bowmen, and took face or skull trophies. They had the repute of being cannibals, the *Panche* being said to eat their enemies and their own first-born, the *Muzo* their own dead. With all allowance for exaggeration and maligning, the cultural picture is of a very distinct order from the *Chibcha* one. The considerable difference in habitat, with ensuing influence on economy, settlement, and customs, probably put both sets of peoples at a disadvantage in penetrating seriously into the territory of the other—much as between the *Inca* and the Tropical Forest tribes that bordered them. *Chibcha* commerce with the *Panche* went on between and probably during wars—by a sort of silent trade.

As for the other *Chibcha* neighbors, some of whom, like the *Morcote* and *Tunebo* on the east, spoke kindred languages, their distinctness seems to have been felt as less sharp. They were evidently more backward and less organized, but presumably shared many specific elements of culture with the *Chibcha.* This accords with their terrain on the north, east, and southeast, into which *Chibcha* habitat graded off from the high savannah.

HISTORY

Mythical histories.—A few tales have been preserved which to us are myth and to the *Chibcha* no doubt were history. A Guatavita ruler empaled his favorite wife's lover, made her eat his flesh, had songs composed about the event—but forgave her. She, however, threw herself and her child into the lake. The ruler ordered a priest to dive and bring her back. He returned saying that she was living with a snake (dragoncillo) and refused. On the ruler's insistence, he went down once more and brought back the little girl, dead and blind; the dragon had plucked out her eyes.

A former Zaque at Hunsa, named Hunsa-huá, fell in love with his sister. She became with child, was abused and attacked by her mother, and fled with her brother, following a dart which he threw from his atlatl. In the Zipa's realm, the child was born, and turned to stone. They went southward, until at the great fall of Tequendama, at the *Chibcha* frontier, they became tired and also turned to stone. Hence, the Zaques married their sisters, which the Zipas and Iracas did not.

When Bochica disappeared at Sugamuxi, Nompaném was Iraca. He was succeeded by his sister Bumanguay, who left the rule to her husband from Firavitoba. Then the great wizard Idaca-n-sás held the throne; after whom it was arranged that the Iraca should thereafter be chosen, by the chiefs of Gámeza, Toca, Pesca, and Busbanzá, alternately from Firavitoba and Tobazá. Once, however, when it was Tobazá's turn, a bearded and ruddy Firavitoban seized the rule, aided by his six stout brothers. When the chief of Gámeza refused his sanction, he was hanged by the usurper. This united the other districts, the Sugamuxi population fell off, the usurper was killed and secretly buried by his brothers, and the succession returned to Tobazá in the person of Nonpaním—an obvious doublet of the earlier Nonpaném.

What there is of actual history in such tales is a few institutions, such as the sister-marrying Zaque lineage, and the theoretical electoral college to choose the Iraca.

Native history.—A reputed history, that is, a nonsupernatural one, has been recorded only for the Zipas, and that merely for the two rulers preceding the incumbent of 1536. At that, it flatly contradicts less consecutive fragments recorded at Guatavita and Tunja. It is here summarized as a sample of *Chibcha* local or family tradition. Its authenticity is not in the particular events reported, but in the type of events characteristic of *Chibcha* political history.

Saguan-machica, having been heir-apparent at Chía, became Zipa at Muequetá-Bacatá. With the aid of his vassal of Pasca, on the southern frontier, he attacked Fusagasugá and Tibacuy, who were defeated and submitted. He was then attacked by Guatavita, allied with Tunja, but repelled them. The ruler of Ubaque to the southeast attacked Pasca and Usme, but his own districts of Chipaque and Une were ravaged and he had to flee. An invasion by the foreign *Panches* followed, but they were beaten off and subdued after some years. Finally, with aid from Sopó, Saguan-machica marched against Tunja, and beyond Chocontá a great battle was fought, in which both the Zipa and the Zaque were killed.

Nemequene succeeded at Bacatá, and Quemuenchatocha at Tunja. Nemequene turned to repel the *Panche*, while he sent his nephew and successor Tisquesusa from Chía to subdue revolted Fusagasugá and Tibacuy. Zipaquirá and Nemocón invaded from the north, but were driven out and themselves occupied. Next, he conquered the realm of Guatavita in a surprise attack, having persuaded Guatavita's frontier vassal at Guasca to join him. He installed his brother as governor at Guatavita. A campaign southeast against Ubaque followed, whose ruler submitted, giving two daughters as wives to Nemequene and his brother; and another to the north, against Susa, Ebaté, and Simijaca on the headwaters of the Suárez River, whose rulers were also forced to submit, and became vassals of the brother at Guatavita. This brother was killed in a surprise attack on the treasure of Ubaque. Finally, Nemequene turned, like his predecessor, against the Zaque, who was reenforced by the Iraca. A battle was fought in the Turmequé region, in which Nemequene was wounded while in his litter. His army fled, but was pursued only to Chocontá. Nemequene died 5 days after being carried home.

His nephew Tisquesusa succeeded. His general Saquesaxigua was sent to invade Machetá, Tibirita, and Tensa in the southern dominions of the Zaque, in Somondoco-Garogoa drainage, and exacted war-tribute, but seems not to have achieved a permanent conquest. Preparations were on foot for another great war against the Zaque when the Spaniards arrived.

This short span of perhaps 60 years is as far back as *Chibcha* historical memory reached.

The Spanish Conquest.—*Chibcha* resistance to the Spaniards was piecemeal and ineffectual. There was no defense of capitals, and no major battles were fought. Jiménez de Quesada in 1536 pushed up the Magdalena River, apparently without knowledge of the existence of the *Chibcha*. Turning eastward and crossing the western range of the Cordillera Oriental, he found himself in *Chibcha* territory near Vélez, or Suesca. He seems to have been directed by encountering *Chibcha* trade salt along the Magdalena River, rather than by definite reports of a great nation. What the *Chibcha* may have heard about him or any Spaniards is even more shadowy. He entered the country with 166 men and 59 horses, having lost or sent back 34 men since leaving the river, and more than 600 since leaving Santa Marta.

Quesada was advancing via Nemocón and Chía toward Muequetá when the Zipa, with a force said to have numbered only 500 or 600 but carrying the sacred body of his predecessor, attacked the Spanish rear and was routed by the cavalry. There was some further resistance in crossing the Funza River, but Muequetá was found abandoned: the Zipa and his retinue were hiding at Facatativá to the west. In Muequetá, the Spaniards were harassed somewhat, but these actions seem to have been little more than guerilla attacks from among the swamps. A reconnaissance to the south encountered resistance from the *Panche*, until the Spaniards withdrew. Quesada then marched from Muequetá to Guatavita, Chocontá, and Turmequé in Zaque domain, with a side party visiting the Somondoco emerald mine. From Turmequé, he pushed east to the frontier on the Lengupá and thence northwest to Hunsa, where the Zaque surrendered without resistance, to die very shortly after. A fair amount of gold was taken here—191,000 pesos' weight—whereas Muequetá had yielded little. From Hunsa, the Spaniards marched east to Sogamoso, where the temple was burned; the Iraca here was the only principal ruler who survived the Conquest. The Tundama, immediately north, put up a fairly stiff resistance and managed to retire to the island and swamps of Bonda, or Duitama. The main northern principalities had now also been overrun and cowed; so Quesada left a camp at Suesca and led his main force on a vain gold quest over the range to the Magdalena River and up this to Neiva; from which he returned in January 1538, to Muequetá. The essential conquest had been completed in little more than a year.

The Zipa was still in hiding. A surprise raid resulted in his mortal wounding, but the Spaniards retreated without the hoped-for treasure. The Zipa's successor harried the Spaniards until they transferred their base from Muequetá to Bosa, where their cavalry had more freedom of action. Soon, however, fearing treason or defection among his following, he united with them against the *Panche*, the hereditary enemy, and a joint *Chibcha*-Spanish force finally defeated them. The "alliance," however, was evidently a submission, and the new Zipa was soon seized and tortured to death in an endeavor to wring from him confession of hidden gold which he probably no longer possessed. Quesada founded Spanish Bogotá at Teusaquillo; and Vélez and Tunja (Hunsa) soon followed. Meeting Belalcázar and Federman who came from the south and east, Quesada, leaving a brother in charge, departed for Spain to obtain confirmation of his conquests. The

Chibcha country and people had been distributed to his followers in encomiendas.

Oppression and gratuitous cruelty kept goading the *Chibcha* into hopeless rebellions. The new Zaque, though converted, and the lords of Boyacá and Turmequé and others were executed. Guatavita rose in arms and was massacred. The Tundama was overpowered in his lagoon fastness, and though he escaped, finally surrendered, only to be murdered over insufficiency of gold tribute. There were desperate resistances at the rock of Tausa, Simijaca, Ocabita, and Subachoque; all ended in slaughter. By the end of 1541, the last of the *Chibcha* had submitted. They seem to have fought better in the 3 or 4 years after their realms were broken than in defending them. Their political structure, which had not sufficed to overcome even the unorganized *Panche*, failed conspicuously to hold against Spanish aggression. After 1541 there was never even an attempt at rebellion.

The culture faded out rapidly under Spanish rule, and even the language became extinct in the 18th century.

SOURCES ON THE CHIBCHA

The literature is limited, and authors of successive generations have built on each other. The number of data of distinct original source is, therefore, less than might be expected, and some of these are flatly contradictory in spots. The two fundamental sources are Gonzalo Jiménez de Quesada, résuméd in Oviedo (1851–55), "Historia general y natural de las Indias," book 26, and Juan de Castellanos, "Historia del Nuevo Reino de Granada," Madrid, 1886. Quesada led the expedition which conquered the *Chibcha*, and Castellanos began as a soldier in the Americas and ended up as priest at Tunja from 1561 to 1606. He wrote in blank verse, but his account is full of clear, exact, prosy ethnography. Third in importance is Fray Pedro Simón (1882–92), who came to Bogotá in 1604, and wrote "Noticias historiales de las Conquistas de Tierra Firme," the fullest work on the *Chibcha*, though nearly a century removed from native condition. Juan Rodríguez Fresle (1859), son of a conquistador, wrote a Relación in 1636. He was followed by a Bogoteño, Bishop Piedrahita (1688), "Historia general de las Conquistas del Nuevo Reyno de Granada," mostly written in 1666 in Madrid, but published in Antwerp. Still another Bogoteño and churchman, Alonso de Zamora (1930), wrote a "Historia" which comes down to 1696. The anthropological value of these authors is in general in inverse relation to their lateness.

In the late 18th century, Domingo Duquesne, a village priest, discovered a *Chibcha* calendar and symbolism, which seem wholly imaginary but have long haunted the literature through having got into Humboldt and Acosta. The latter's "Compendio Histórico" was published in 1848. Another Colombian, E. Uricoechea, in 1871 reworked the sole source of our knowledge of the *Chibcha* language, Bernardo de Lugo's rare "Gramatica" of 1619. Still another Colombian, Vicente Restrepo, published in 1895 "Los Chibchas antes de la Conquista Española." This is marked by excellent judgment and is easily the most useful modern work; with E. Restrepo Tirado's "Los Quimbayas," 1912, as a supplement, it serves as a convenient introduction to the major Colombian cultures which the Spaniards obliterated. M. Triana's "La Civilización Chibcha," 1922, is useful though speculative in parts. Clements Markham's "The Conquest of New Granada," 1912, is readable but external in its understanding of native culture and evidently sloppy as a piece of historical composition: compare the events attributed to April 6 on pages 115 and 117 and to August 6 on pages 141 and 149.

All in all, the sources on the *Chibcha* are not only limited but poor in quality. There is not a single document purporting to give the native point of view in the native's form of statement; nothing even approaching a Garcilaso or Cieza, let alone a Sahagún or Landa. The original conquistadors were adventurers, often keenly perceptive of what they saw, but interested chiefly in their own adventures, against which native life served only as a foil. One is left with a constant sense of inaccuracy in reading their statements of *Chibcha* beliefs and standardized institutions; what seem most authentic are the minor incidental remarks and the inferences of which the Spaniards were not conscious, as of the role of the number six. A great desideratum is a monographic treatment of the *Chibcha* by a trained modern ethnologist expert in interpreting historic documents and conversant with the terrain and archeology.

CULTURE

SUBSISTENCE ACTIVITIES

Chibcha agriculture was by rainfall, except for some irrigation by the *Guane* in the north, where the elevation was less. Women worked the fields with the men. Farm tools were of wood. Lands, which probably means farm plots, are said to have been individually owned and passed on to wives and sons, i. e., not to nephews. If correct, this suggests absence of matrilineal clans, at least of landholding clans, as a functioning principle in the society at large, in spite of the uncle-sister's son succession in rule and priesthood.

Potatoes may have been as important a staple as maize, and more so at higher altitudes. They came of different shapes and sizes, and white, yellow, or dark (morada). Maize, except in the lower lands, was a single crop, harvested in September. Its colors were white, yellow, pink, red, black, and "rice-maize." It was ground on slightly concave metates, made into mazamorra, and boiled or toasted in balls wrapped in leaves.

Cubio tubers (*Tropaeolum*) were important. Quinoa (*Chenopodium*) was leached against its bitterness, but soon went out of use in Colonial times. Other foods were the nonpoisonous yuca or manioc, arracacha, sweet potatoes (camotes), beans, squashes, tomatoes, and ají. The fruits mentioned—aguacate, pineapple, guayaba, pitahaya—are distinctly more tropical, and must have been brought up from the lower valleys. Where the cotton was grown is not clear; some at least came from the *Panche*.

Coca and tobacco were both cultivated. Datura, the other religious narcotic, probably grew wild. Alcohol, in fermented maize-chicha, was standard at public ceremonies and feasts, when everyone drank until unconscious.

Salt was gotten at salinas at Nemocón, Tausa, and Zipaquirá, was boiled down in hemispherical pottery pans, and was traded in these.

Meat and fish can have formed only a small part of the diet, rabbits and the curí, or cavia, being the most important. Deer were abundant, but to kill them without the chief's permission was forbidden—or did the Spaniards read European law into *Chibcha?*

HOUSES

Houses rested on posts, had walls of cane with mud daub, thatched roofs, and were either rectangular with gabled roof, or circular with conical roof and sometimes double walls. Palaces and temples seem to have been of the same construction. Palaces and towns were enclosed in palisades of canes between posts, above which rose occasional crow's-nests perched on poles. Stone as well as adobe masonry seems to have been totally lacking. Ten scattered stone columns, mostly cylindrical, 3 to 6 m. (about 10 to 20 ft.) long, near Ramiriqui, may be *Chibcha* or pre-*Chibcha*.

Beds were cane grids, covered with cotton cloaks. Low chairs or stools, with or without backs, carved out of single blocks of wood, were reserved for rank; ordinary folk squatted on the ground. Most houses must have been rather bare.

DRESS

Dress was of cotton and ordinarily consisted of two white pieces, called mantles by the Spaniards, for both men and women. The lower was wrapped around the waist, the upper probably knotted over a shoulder by men, fastened in front with a tupu pin by women. The feet were bare, the hair long, headdresses general. Distinguished people had red or black designs painted on their clothes with a brush. Successful racers, rewarded by the chief with mantles, wore these with one end dragging on the ground. The habitual full covering of the body by both sexes was probably instigated by the cool, foggy climate.

MANUFACTURES AND TECHNOLOGY

That *Chibcha* art was low-grade follows from the backwardness of their technologies, but the reason for the retardation of these is unknown. The culture was obviously oriented otherwise. A hereditary nobility might conceivably have developed good taste, but did not. It was the gold of a figure, or the ideas which it expressed, that were of interest, and the crudest stereotypic representation sufficed. The goldcasting art involved a certain technical skill, it is true; but the techniques were common property from Central America to Ecuador; and *Chibcha* products were on the whole inferior to those of Chiriquí, Coclé, Antioquia, and Quimbaya.

Metallurgy.—The materials of this art were gold, less often copper, frequently copper-gold alloy (tumbaga). These metals were certainly melted and cast, but it seems doubtful if smelting of ores was known: in that case, one should expect more silver. It may be that all the supplies of this metallurgy were native, from placers; which would also account for the occasional pieces which are part silver or platinum. Some of the metal was beaten out into thin sheets over forms, molds, or repoussé; some was cast, but most often into definitely flat figures—either as a carry-over from a time when beating was the only process known or in order to obtain the largest surface from the least amount of gold. The cramping of a three-dimensional process into essentially two-dimensional shapes of course tended to prevent from the outset any freer esthetic development. The casting was mainly by cire perdue; and in this, there was a predilection for rolling out threads of wax and applying them to the figure. In the casting, this gives a filigree effect; but though self-soldering was known, the filigree appearance was mostly obtained by casting in one flow. So great was the addiction to this wire effect that not only noses, eyes, mouth, and fingers but often limbs were shown by it, or flat surfaces, like the back of a chair. Realism under these circumstances is, of course, out of the question; filigree is in its nature a decorative device; but the Colombians and Panamanians kept using it to represent the symbolic idea of persons, animals, and objects. A species of gilding was practiced: treatment of tumbaga with vegetable acids ate away the surface copper and left a thin film of gold.

In all this, the *Chibcha* followed the manner of other tribes, only executing it a little less skillfully. This inferiority may be the result of their territory being without gold, so that the art and the material reached them together, and relatively late in their history, as something second-hand though prized.

Textiles.—Textiles were at least prevailingly of cotton; other fibers seem not to be mentioned. References to decoration are by painting, with a brush; but pottery cylinders with relief patterns are found, which were most likely used for printing cloth. Their designs, which include a variant of the inter-American step-fret, are not unpleasing, and contain possibilities of development; but the execution of the stamps is not too careful. A really self-respecting textile art would hardly have renounced woven pattern as much as the *Chibcha* did. At least some of their cotton came from the *Panche*, who received one manta in trade for fiber sufficient to weave three.

Weapons.—See War and Weapons, below.

Pottery.—A possibly late import would not hold true for ceramics; and though Colombian pottery is never of the best, *Chibcha* ware fails to attain first ranking within it. There is some painting, some incising, and a good deal of modeling, but little good finish. In fact, there is too much modeling. With their limited control, the *Chibcha* potters might have achieved pleasing simple shapes and decoration if they had concentrated on these objectives. But as in their goldwork, simplicity was not felt as desirable, and they plunged instead, frequently, into effigies of misshapen animals or human figures with elaborate necklaces, distorted, spindling limbs, and exaggerated faces. In these faces, and perhaps in the limbs, the influence of the goldcaster's art is visible. The nose begins at the single eyebrow line, which extends across the whole face. Eyes and mouth are most frequently made by applying a long button of clay and then grooving this lengthwise; but the effect is very similar to the narrow ovals of wax thread used for designating the same features in gold.

ECONOMICS

Markets were held every 4 days in the principal settlements, such as Bacatá, Zipaquira, Turmequé, and Tunja. This is the concrete statement which comes nearest to indicating these places as towns on the Mexican model. The differences in elevation must have resulted in some variety of local food products, not to mention cotton and salt, and valuables such as emeralds and copper. The latter was obtained at Moniquirá.

Foreign trade was fairly extensive. The *Chibcha* nobility wanted gold—for offerings, possession, and burial; and this had all to be imported. What the *Chibcha* gave in return was excellent salt, abundance of cotton cloth, and emeralds. They got these last by washings at Somondoco in the rainy season. A better quality was obtainable across the Cordillera in enemy *Muzo* territory; possibly trade went on between hostilities. Gold was secured at international markets or "fairs" on the Magdalena River between Neiva and the Coello, and on the Suarez at Sorocotá. There are said to have been moneylike disks (tejuelos) of cast gold, measured in the curve of the index finger against the first joint of the thumb, or if larger, with a string; the measure of thickness is not stated. The balance seems to have been unknown to the *Chibcha;* at any rate there were no standards of weight.

Debts or deferred payments are said to have increased one-half each moon, or a hundredfold in a year!—which argues a credit system of some rudeness; or an inaccurate understanding of it.

POLITICAL INSTITUTIONS, RULERS, AND NOBILITY

There was little permanence in the larger *Chibcha* states or "kingdoms" like those of the Zipa and Zaque. Each district had its lord, who might rebel against his overlord. A powerful or energetic ruler invaded the territories of his neighbors, one at a time, and if successful, exacted their submission and tribute, after which they were generally left as vassals. No considerable army was brought together by any ruler to oppose the Spaniards. Each awaited his turn. Resistance came more frequently after Spanish occupation than before. How far the overlordship of the Zipa and the Zaque extended is also not clear. To the north of both lived *Chibcha* who may have paid them prudent deference, but seem not to have been subdued or even invaded: those of Guane, for instance. The Iraca at Sogamoso was independent of both Zipa and Zaque. In his selection, the neighboring Tundama at times had a voice. But the Tundama's residence was also not far from the Zaque's Hunsa-Tunja. If the Tundama was genuinely independent, the Zaque's proper dominion must have been rather restricted, in spite of his overlordship extending down the Garagoa Valley. One divergent account makes Guatavita supreme in the South, with the Bacatá (Zipa) his "lieutenant and captain general," who revolted only just before the arrival of the Spaniards. Similarly, Ramiriquí, not Hunsa, is said to have been the original seat of the Zaque.

The political condition was evidently similar to that in the Valley of México, or for that matter among the *Maya;* with this difference, that in México large religious structures provided a nucleus for a physical town which embodied or represented a cultivated district more effectively than among the *Chibcha.* Otherwise, the rivalries and alliances of Tenochtitlan, Tlatelulco, Texcoco, Tlacopan, Atzcopotzalco, Chalco, Tlascala, seem very similar to those of Bacatá, Ubaque, Guatavita, Hunsa, Sugamuxi, etc. We must assume that dominance fluctuated and refluctuated, without the total picture changing much.

What is clear is that in both regions there were noble and powerful families of señores or lords, of whom the greater ruled the lesser, as these ruled their districts. It is specifically said that town chiefs were absolute at home, though vassals of their overlords. These overlords were shown every respect which native imagination could conceive. Even chiefs never looked them in the face, but turned their "shoulders" away or bent far down in their presence. The Spanish soldiery were thought shameless because they spoke to their own commanders eye to eye. An incorrigible thief was forced to look his ruler in the face, and then was let go as humiliated worse than by death. When the Zipa wished to spit, a dignitary knelt with averted face and held out a cloth. No messenger, and no noble even, was received by him without a gift. The Guatavita exacted his authorization, in return for gifts, for anyone wishing to wear a cloak of distinctive design in his dominion. Litters were sumptuary furniture, closely restricted; the Zipa's was hung with sheets of gold, and was preceded by attendants who cleared the path or strewed it with cloth or flowers. Roads connected the rulers, wooden "palaces" with their wooden temples. The more prominent ones had bath retreats: the Zipa at Tenaguasa, Tabio, and Teusaquillo (the modern Bogotá); the Zaque at Ramiriquí, the Iraca at Iza, the Guatavita at Guasca.

All this ostentation not only reemphasized rank, but demanded economic support, which in turn involved tributes. The Spaniards were disappointed in the amount of gold they were able to seize; by their standards, rulers so absolute and exalted should have had more. But the amount was considerable in view of the fact that the *Chibcho* imported all their gold; and they certainly used it with conscious ostentation, as in hanging sheets of it to clank in the breeze in front of their chiefs' doorways, and as in the "el dorado" ceremony of Lake Guatavita. Commoners' tribute appears to have been in cloth, produce, and labor.

The Spaniards were rather casual in their use of names of sites, chiefs' titles, and personal names. They spoke of "el Bacatá," though this was a town or district. Sugamuxi, on the contrary, was the personal name, according to Castellanos, of the Iraca, but survives as the town of Sogamoso. This is much as contemporary Europeans might have used the terms Richmond or Navarre, and may have some basis in native usage, as well as Spanish indifference.

Succession to rule, as also to priesthood, was matrilineal. It may well have been so in the population at large also, though the Spaniards seem to be silent on this point. A sister's oldest son succeeded; failing him, a brother. It is specifically said that sons inherited personal property; a nephew, the chief's office (estado). There was a training for succession which resembles that for priesthood. The heir was confined for about 6 years in a temple, forbidden to see the sun, and allowed out only at night. He abstained from meat, salt, pepper, and sexual indulgence, and was whipped at times. At Guatavita, he went out on the lake in a raft, anointed with gold dust. One version makes this his induction, another a recurring religious rite. The crown prince to the Zipa ruled at Chía, until his accession. It is said that in default of a close heir, the Zipa selected his successor by exposing the possible candidates naked before a girl, favoring the one who manifested no alteración sensual. The story is probably apocryphal as to fact but illustrates *Chibcha* theory and attitude.

POSITION OF WOMEN

The *Chibcha* practiced a girl's puberty rite, which is symptomatic of their incomplete emergence from primitiveness. The girl sat for 6 days in a corner with her face and head covered—as in so much of western North America. Then she was bathed and there was a feast, with the inevitable chicha. Chastity in girls was a matter of indifference, if not distrust; but husbands insisted on their wives' fidelity, with ají ordeals if necessary. Whether this expectation was extended to the feasts, with their general intoxication and the mixing of social ranks, is less clear. The Spaniards certainly construed them as occasions of unlimited sexual indulgence. The significant fact is that women participated in the drinking. Polygyny was widespread and not confined to the nobility, who might have up to 100 "wives," as against the 2 or 3 of commoners. The wives shared one joint room, the husband had another; which tended to make the wives accepting participants rather than competitors. Wives were bought, for an agreed price; or a suitor might come and sit at the door with a gift of cloth, a load of maize, and part of a deer. (Ct. the alleged hunting prohibition, p. 899.)

WAR AND WEAPONS

The *Chibcha* were no bowmen, at least not in warfare. They occasionally hired archers from their enemies, the *Panche* and *Muzo*. In this non-use of the bow they resembled the *Aztec* and the Peruvians. Like the *Aztec*, and the Peruvians of the Early Period, they hurled darts with the spear thrower or atlatl (tiradera). Why this weapon was given the preference over the bow is not clear, but it seems that there must be a functional relation to density of population and the resultant concentration of armed forces, together with need for their more compact organization. It can hardly be an accident that *Nahua*, *Chibcha*, and Peruvians sent their armies out without bows, but that more primitive American peoples, of looser political structure, generally employed them.

The *Chibcha* atlatl was a stick with an engaging peg at one end, and a longer curved fingerhold near the other. The spears were 1.2 to 2 m. (4 to 6½ ft.—6 to 10 palmas) long, with fire-hardened foreshafts set in shafts of cane. Slings were used somewhat, as in Perú. Close-in fighting was with two-handed wooden clubs (macanas). If an attribution in Restrepo (1895, pl. 16, fig. 43) is correct, they were four-edged, convexly flaring out from the handle. Shields, to judge from figurines, were small and rectanguloid; but in Tundama, large shields, or paveses, of wood were used.

RELIGION

Priests and Shamans.—The office of priest, cheque or jeque, and its acquisition, being somewhat parallel to those of chiefs, suggest that both were filled only from the nobility. The priest also acquired his status from his mother's brother. He trained for 12 years in a special building, "fasting," that is, eating only maize once a day, meat rarely, no salt or pepper; and observing continence. Finally, his ears and nose were pierced, like a chief's, and he was "invested" by the ruler with a painted mantle and a calabash container for his coca. Thenceforth, he lived in the temple, or by it; remained chaste, on pain of deposition; received all his food, but was expected to eat little, as well as to wake much of nights and be taciturn. At stated times he fasted and drew his own blood. Perpetual penance seems to have been the first demand of the office. The ruler of Iraca, said to have been the highest priest in the whole land, had wives, so his position may have been an exceptional combination. The observation that there was no hierarchy probably means merely that there was no ecclesiastical organization corresponding to the Catholic Church, but that each district had its own priests as it had its rulers.

The priests officiated for the public good, as when in time of droughts they threw ashes up from a peak, to turn into clouds. They were also consulted by individuals, on whom they imposed an abstinence similar to their own; after conclusion of which, they received the gold or other offering, gave it to their deity, asked for his answer, and imparted it; their own fee was two mantles and a bit of gold. Both coca and tobacco were taken by the priests; Datura is less certain.

The Spaniards specifically distinguished hechizeros from the jeques—shamans from priests. These "wizards" were generally old men or women, who, not supported by their relatives, wandered about in their poverty, selling cures, poisons, abortions, aphrodisiacs, diagnosing, finding lost objects, and explaining dreams. In order to see or foretell, they chewed tobacco or drank an infusion of Datura, tyhyquy; or ate two other herbs, yopa and osca; and in this condition they watched for twitching of fingers or movements of joints as omens.

Cults.—*Chibcha* cults offer none too clear a picture, partly because they were not organized into a clear conceptual system, and partly because of the Spaniards' own religious preconceptions. Besides the temples with their "idols," there were shrines to lakes and rivers, caves, and mountains. Lakes in particular were likely to be holy, and had some association with snakes. The Spaniards paid particular attention to offerings because these often included gold and emeralds; and they were naturally interested in human sacrifice. But, of course, there were innumerable humble and domestic sacrifices; and in many rites penances may have played as important a part as offerings. The temples however were crowded with receptacles of offerings, ranging from gold to cotton cloth; and as these vessels became full, they were secretly removed and buried. Presumably, most valuables sooner or later were drained off by religion or burial, so that there must have been a steady outflow of *Chibcha* products to purchase the gold they needed.

Human sacrifices were made primarily to the Sun, who "ate persons." When the Spaniards arrived, they had children thrown or handed to them as being reputed sons of the Sun. There were a number of temples to the Sun; and the town Chía was named after the Moon. Offerings to Bochica and Chibchachum must include some gold, it is said; so that it is natural that they were directly worshiped chiefly by rulers, nobles, traders, and goldsmiths. Bachúe received incense gum; Cuchabiba, the rainbow, mainly emeralds and beads from those sick of fever or women about to bear a child. A Nencatacoa, patron of weavers and cloth painters, was given chicha. This constant reference to offerings, if the Spaniards have not unduly exaggerated it, suggests prevalent religious approach for individual benefit, rather than a fixed series of ceremonies for the common good.

We do hear of a September maize harvest festival with processions to the temples, with masks painted with tears and their wearers beseeching; of a double New Year's rite at the beginning of the March and June moons, when each home burnt its refuse and threw out its hearth ashes; of the Guatavita Lake ceremony with its gilded protagonist and offerings by the nobility from rafts. Guatavita was one of a series of five sacred lakes or ponds inhabited by snake gods, to which a famous pilgrimage was made—Guatavita, Guasca, Siecha, Teusacá, and Ubaque—which took 20 or more days, though the airline distance is not many more miles; but there was much chicha consumed each night. Tunja voyaged from Guatavita to Ubaque, Bacatá the reverse, ending up with the night rite on the lake.

While coca was associated with the priesthood, Datura was in common use by the public as well as the "wizards." It was used to test slaves, with the idea that if they wandered out while unconscious, they would sooner or later try to escape. The *Guane* similarly gave it to their children before puberty. If the boys picked up farm tools or weapons, and the girls spindles or grinding manos, it was a sign that they would be active workers.

The *Chibcha* thought and grouped mostly in 6's. Priests trained for 12 years, chiefs for 6 ("five to seven"). Mourning was for 6 days. Maize was of 6 colors. At a child's weaning, cotton wet with the mother's milk and wrapped in grass was thrown into the river, and 6 swimmers tried to retrieve it as a good omen. In races, the chief rewarded the 6 winners, giving 6 cloaks to the first victor. The girl's puberty rite lasted 6 days.

Human sacrifice.—Human victims were variously drawn. Some were war captives, some slaves, some children born in good families. One practice was to buy small children from the *Marbachares*, 15 days (or "30 leagues") east between the Guape and Guechar Rivers. The traders resold them to high chiefs, who might keep as many as three. They were reared in the temples; were sacred and might not touch the ground, so that they were carried about; ate only out of their own dishes; were believed able to converse with the Sun; and when they sang, all wept. At early puberty, they were sacrificed, unless they had lost their chastity, which rendered them impure. Amid appropriate songs, they were cut open, the heart and viscera removed, the head severed. This custom presumably obtained at the specific Sun temples.

To appease the angry Sun when there was a drought, priests took a child to a mountain top that looked eastward, and before sunrise killed it with cane knives and anointed the east-facing rocks with its blood. The body was left for the Sun to eat, or disposed of in a cave.

A sacrifice with Mexican reminiscences, but whose occasion is not known, was to bind a slave into a sort of nest on a mast, where he had atlatl darts thrown into him. Priests caught his blood, and later buried the corpse in the mountains.

Captive enemy children, especially of the *Panche*, were sacrificed at the temple on return, their blood sprinkled on the posts and floor, their bodies exposed on the mountains for the Sun; or they were kept for the same fate before a new war party set out.

Rulers firmed their house posts, and the fortunes of the inmates, by sacrificing girl children, said to have been given from noble families. Each heavy post was pounded up and down on a live child while earth was being poured in. A similar practice is reported for the Sugamuxi-Iraca temple, but with slaves as material.

Rulers were wont to be buried with several wives and slaves, who had been stupified with chicha containing Datura juice.

Of animals sacrificed, we hear only of guacamayo and papagayo parrots—the latter having first been taught to speak—brought up from the warm country. Their heads were kept.

MYTHOLOGY

Chibcha mythology is confused, partly because of conflicting or misunderstood Spanish renditions, more largely because *Chibcha* culture had not achieved systematic organization in any field. The tales are like the rest of the culture in being highly localized. Some are cosmological, some ritual; some run into legends of the cacique-ships. In these last, recent affairs that might be historical, or are pseudohistorical, are interwoven with the events of the creation in a manner to illustrate the complete lack of time perspective in the

Chibcha mind. All in all, the elements of the mythology are similar to those of primitive American Indians, without notable reworking into a coherent philosophy.

A sort of creator, called Chimi-ni-gagua, began to shine when there was as yet nothing in the world, and then originated large black birds, followed by the sun and moon.

A conflicting tale begins with the cacique of Sugamuxi and his nephew of Ramiriquí while the world was still dark. They created men of yellow earth, women of tall herbs. Then the Iraca sent his nephew up to become the sun, and followed as the moon. This contradicts other statements that the moon was regarded as the wife of the sun. It also illustrates the influence on religion of the ruling class; and emphasizes the northern Zaque and Iraca by ignoring the Zipa as ancient.

Still another creation account revolves around a true myth and cult personage, the goddess Bachúe, also called Fura-chogue, "beneficent female." She emerged from a small lake near Iguaque, northeast of Tunja, with her 3-year old son, whom, when he grew up, she married, and had four to six children at each birth. With these she populated the land; then, exhorting them all to live in peace and order, she and her son-husband reentered the lake as two snakes. Here a local cult seems to have become blended with a mother and earth goddess concept. Bachúe was looked upon as a protector of crops, and gum or resin—in other words, incenses—were offered her. We hear nothing of any temple or precious offerings; such may have been made at the lake; but both myth and cult smack of the farming populace, not of the nobility.

Another goddess was Huitaca, also called Chie and Jubchas-guaya (guaya is "mother"), who practiced and preached pleasure, dancing, drunkenness, and sexual laxity, and got an expectable following. She is said to have come after Bochica, and again to have been turned into an owl, or the moon, by Chimi-sopagua, a synonym of Bochica. There is no record of localization of this myth, nor of accompanying ritual or offerings.

Chibcha-chum—chum is "rod" or "staff"—was a patron deity of the Bacatá region; and offerings were made to him. Angered at his worshipers, he flooded the sabana by moving two rivers to flow into the Funza-Bacatá. Bochica, appearing on a rainbow, hurled his golden staff to Tequendama, opening the great waterfall there. Chibcha-chum was placed, or went, underground, where he supports the world; when he shifts shoulders, there is an earthquake.

The most famous myth personage is the culture hero Bochica, also called Xue (lord), or Nebterequeteba, or Chimi-sapagua as "messenger" of Chimi-ni-gagua. According to one statement, he lived on earth 20 generations before the Spaniards arrived, according to another,

4. He came to *Chibcha*-land from the plains of the Far East. The Iraca region claimed that he entered there; the Bacatá area, at Pasca on their south. From there he traversed the Zipa domain, went on north to Guane, south through Tunja, then east to Gameza and Sugamuxi. Here he "died," or went to the sky, or disappeared at nearby Iza. This makes a pretty complete itinerary through *Chibcha* territory, with the exception of the southeastward Garagoa drainage in the Zaque's domain; and many of Bochica's footprints, caves of retirement, and other holy places were shown.

Bochica is described as old and bearded; a white complexion is ascribed him only by late authors; and various traits of costume mentioned—long hair, headdress, knotted mantle, bare feet—are merely standard *Chibcha* attire. He is always said to have preached and taught, especially virtue, charity, and observance of custom law. His specific civilizing instruction is exemplified chiefly by the teaching of spinning, weaving, and cloth painting.

Bochica was worshiped with offerings. In Iraca, he was known as Sugu-monxe and Sugu-n-sua, invisible or disappearing person and sun, respectively. Iraca also had tales of one of its rulers, Idaca-n-sás, who "inherited" the powers of Bochica, and could produce rains, droughts, epidemics, and the like.

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THE NATIVE TRIBES AND LANGUAGES OF SOUTHWESTERN COLOMBIA

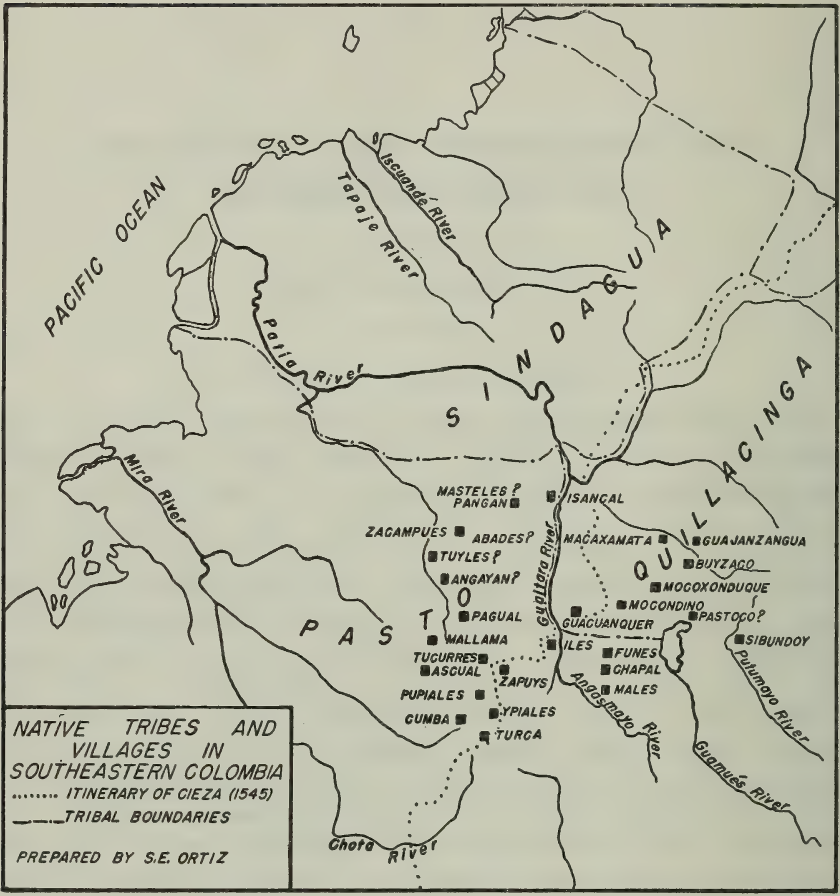
By Sergio Elías Ortíz

TRIBES AND BOUNDARIES

The earliest known Indian name in southwestern Colombia in the region between lat. 2° and 5° N. and long. 1° and 3° (west of Bogotá) was *Quillacinga Condelumarca* (Cabildos de la Ciudad de Quito, Book 1, Libro verde, I, p. 106). Later, Pedro Cieza de León, the first chronicler of the inhabitants of this territory, distinguished two culturally different peoples in the region: the *Quillacinga* and the *Pasto* (map 1, *No. 24;* map 7; map 10). He listed the following *Quillacinga* settlements: "Mocondino and Bejendino, Buyzaco, Guajanzangua and Mocoxonduque, Guacuanquer and Macaxamata." *Pasto* settlements were: "Ascual, Mallama, Tucurres, Zapuys, Iles, Gualmatal, Funes, Chapal, Males, Piales, Pupiales, Turca, Cumba" (map 11). He spoke also of the existence of the provinces of the *Mastel* and *Abad* and of other villages, such as "Isancal, Pangan, and Zacuanpues, and those they call Chorros del Agua and Pichilimbuy; and there are also Tuyles and Angayan and Pagual and Chuchaldo" (Cieza de León, 1923 b, p. 385), which seem possibly to have formed another nationality not very well determined by the chronicler. He ended his enumeration of settlements with the Provinces of Sibundoy and Pastoco, which, because of their geographical location, might be supposed to have formed part of the *Quillacinga* group.

A later document ("Sublevación y castigo de los Indios Sindaguas de la Provincia de Barbacoas, 1635," in the archives of the Curia de Pasto) tells of another considerable group of Indians, the *Sindagua,* who occupied the western or Coastal part of the above-mentioned region. These warlike and indomitable natives were totally annihilated by the Spanish conquistadors in a war to the death that lasted to the beginning of the 18th century.

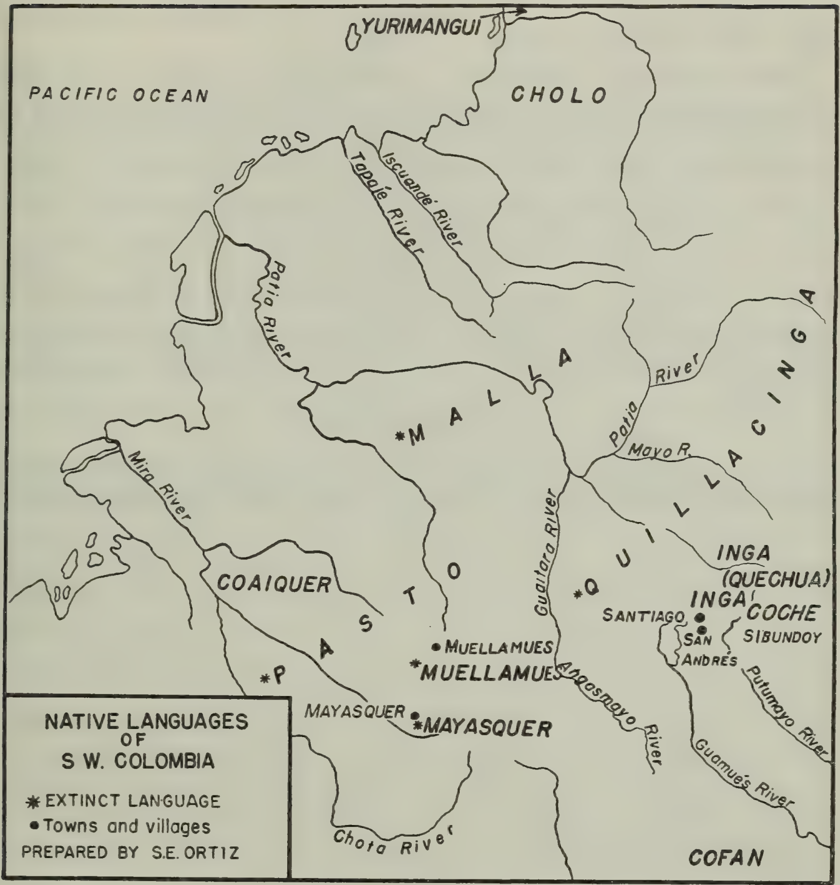
The *Quillacinga* (meaning "half moon" in *Quechua;* so named because of their nose ornament) were separated from the *Pasto* and *Abad* to the west and south by the Guáitara River. Their extreme limit was the Angasmayo River. To the east, they extended to the source of


PACIFIC OCEAN
Iscuandé River
Tapaje River
Patía River
SINDAGUA
Mira River
PASTO
QUILLACINGA
MASTELES ?
PANGAN
ISANÇAL
ZACAMPUES
ABADES?
TUYLES?
ANGAYAN?
MACAXAMATA
GUAJANZANGUA
BUYZACO
MOCOXONDUQUE
MOCONDINO
PASTOCO?
SIBUNDOY
PAGUAL
GUACUANQUER
MALLAMA
ILES
FUNES
CHAPAL
MALES
TUCURRES
ASCUAL
ZAPUYS
PUPIALES
YPIALES
CUMBA
TURCA
Guáitara River
Angasmayo River
Putumayo River
Guamués River
Chota River
NATIVE TRIBES AND VILLAGES IN SOUTHEASTERN COLOMBIA
.... ITINERARY OF CIEZA (1545)
——— TRIBAL BOUNDARIES
PREPARED BY S.E. ORTIZ

MAP 10.—Native tribes and villages in southwestern Columbia. (Compiled by Sergio Elías Ortíz, on the basis of early chroniclers.)

the Caquetá River and the navigable portion of the Putumayo and Guamues Rivers, thus adjoining the *Andaquí*, *Seona*, and *Cofán*. To the north lived the *Sindagua*, with the Patía River between.

The *Pasto*, according to Jijón y Caamaño (1936–38), occupied the region from the Chota Valley to the Patía Valley, and from near the sea to the Cordillera Oriental of the Ecuadorean Andes in the south, and to the course of the Guáitara River in the north. Their neighbors, according to Paz y Mino (1940–42, p. 175), to the north were the *Mastel*, with the *Sindagua* still farther north. To the east were the *Killasenka* (*Quillacinga*), beyond the Guáitara River. To the southeast, the *Cofán* were separated from the *Pasto* by the Cordilleras de Malgús and Kofánes. The *Sindagua* occupied the area between the sources of the Tapaje, Iscuandé, Mamaconde, and Patía Rivers, extending from the mouth of the Mamaconde River to where the Patía River


YURIMANGUI
PACIFIC OCEAN
CHOLO
Iscuande River
Tapaje River
Patia River
MALLA
Patia River
Mayo R.
QUILLACINGA
Mira River
Guaitara River
INGA (QUECHUA)
INGA
COCHE
SANTIAGO
SAN ANDRES
SIBUNDOY
COAIQUER
*Q
PASTO
*P
MUELLAMUES
*MUELLAMUES
Angasmayo River
Putumayo River
MAYASQUER
*MAYASQUER
Guamués River
Chota River
COFAN
NATIVE LANGUAGES OF S W. COLOMBIA
✱ EXTINCT LANGUAGE
• Towns and villages
PREPARED BY S.E. ORTIZ

MAP 11.—Native languages of southwestern Colombia. (Compiled by Sergio Elías Ortíz, on the basis of early chroniclers.)

begins to be navigable, and thence along both banks of the Patía toward the borders of the Trueno Lagoon (Ortíz, 1938 c, p. 541).

LANGUAGES

The languages of these three groups, all now extinct, were *Quillacinga*, *Pasto*, and *Malla*, the last spoken by the *Sindagua* (map 11). That the first two had distinct languages is shown by the following quotations from the Provincial Synod of Quito (Sinodo Provincial de Quito) of 1593 which, assigning the work of translating the catechism and the rules for confession into the native languages, entrusted the task "to Fr. Francisco de Jerez and to Fr. Alonso de Jerez of the Order of Mercy for the language of the Pastos and to Andrés Moreno de Zúñiga and Diego de Bermúdez, priests, for the Quillacinga language."

The *Malla* language is distinguished in the document mentioned above (Sublevación y castigo . . . 1635).

These languages disappeared, perhaps by the end of the 18th century, principally because Spanish and *Quechua* had been forced on the people by the conquistadors and the missionaries as the medium for intercourse and evangelization, as we have attempted to demonstrate in a study on the *Quechua* or *Runa Simi* linguistic family (Ortíz, 1940, pp. 106–22). The result of this linguistic struggle was that only two very small remnants of native dialects now exist in southwestern Colombia. These are: *Coaiquer*, a member of *Barbacoa* subgroup of the *Chibchan* linguistic family; *Ingano*, a *Quechua* dialect; and *Coche*, provisionally regarded as an independent family (Ortíz, 1941, pp. 25–55).

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THE HIGHLAND TRIBES OF SOUTHERN COLOMBIA [1]

By Gregorio Hernández de Alba

INTRODUCTION

Between the *Esmeralda* and *Cara* in Ecuador and the *Quimbaya* in the modern Department of Caldas to the north, the conquistadors, especially Governor Don Sebastián de Belalcázar, found a large number of tribes of different languages and cultures (map 1, *No. 24*; map 7). These tribes occupied the mountains of the complicated Andean system, the valleys of the many rivers, and the slopes toward the low, jungle lands of southeastern Colombia. Because of the fertility of the soils, the mild climate, which was largely cool and healthy, the rich gold and silver mines, and the situation of the lands between the important Colonial centers of Santa Fé (now Bogotá) and Quito, which they were founding, the conquistadors greatly desired to conquer and pacify the tribes, as the Spanish chroniclers and historians call the extermination of the Indians. Some peoples, like the *Pasto* living in the present Department of Nariño, north of Ecuador, readily submitted to the overlordship of the encomenderos and hacendados, and adopted their customs and beliefs. Others, like the *Andaquí*, changed their habitat, and moved down from the region of San Agustín and the headwaters of the Magdalena River eastward to the hot jungles, where they were safe from enslavement. Some, like the *Páez* and *Moguex*, protected by the ruggedness of the Sierras of their territory, resisted the Spaniards and succeeded in large measure in perpetuating their traditions. Others, however, like the *Pijao*, who were seasoned warriors, fought bloodily against the White invaders until they were totally exterminated.

The first historians of the conquest of this part of America [2] held different opinions on the cultural and linguistic relationships between these tribes. Some claimed that the dialects differed so greatly from one tribe to another as to be mutually unintelligible; others maintained that all the peoples of the Andean area of Colombia had the same culture, with only slight differences in dialects and customs. Some authorities affirmed that these Indians had no kind of religion; others gave details which reveal a highly developed religion and an organized cult. In spite of these contradictory statements and in spite of the fact that today only the *Moguex* (*Guambia*) and *Páez* Indians retain indigenous cultures, it is possible to sketch the cultural picture of these Indians at the moment of their first contact with the Spanish soldiers by reexamining the chroniclers of the Conquest according to ethnological criteria, by utilizing modern linguistics, and by studying the ethnology of the present-day peoples.[3] It is also possible to trace the acculturation during the Colonial Period, when new European usages were introduced, and to depict the social and cultural conditions of the present day. The modern penetration of highways into the Indian territory and the official policy of changing the indigenous communities are likely to bring an end to these few remaining examples of primitive Andean societies, which have survived in spite of a poor economy, bad sanitary conditions, and missionary efforts to eradicate their traditions.

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[1] This study was prepared in Washington, D. C., where the Bureau of American Ethnology, of the Smithsonian Institution, the Library of Congress, and the Library of the Pan American Union facilitated my investigation as previously the Government of Colombia, my wife (who was also my companion in field work), and my friends, the *Páez* Indians of Tierradentro, had furthered it.

[2] Cieza de León, 1932; Aguado, 1916; Simón, 1882–92; Oviedo y Valdés, 1851–55; Velasco, 1841–44.

A fertile field for future research lies in continuing anthropological studies in the central mass of the Colombian Andes. The region is as important for physical geography as for ethnology, as its mountain chains run in various directions to form valleys and diversified environments.

It also contains the archeological remains, known as San Agustín and Tierradentro, which long antedate the Conquest and which have an undetermined origin and relationship to cultures in other parts of America. The present article, however, does not deal with these, but is limited to ethnology.

GEOGRAPHY

The tribes considered in this article occupied the eastern halves of the present Departments of Nariño and Cauca, almost all of the Department of Huila, the southern part of Tolima, and the eastern zone of the Department of the Valle del Cauca, which embraces the western spurs of the Cordillera Central as far as Calarcá in Caldas. The region lies between 1° and 4° 40′ N. lat. and 1° and 3° 40′ west of the meridian of Bogotá. The country consists of high mountains of the Andean system, which bifurcate at the Ecuadorean border to form the Cordillera Occidental, which runs to Panamá, and the Cordillera Central, which approaches the Atlantic coast of Colombia. Each branch has high plains (altiplanos), small valleys with rivers which are tributaries of the Patía River to the west, and high mountain peaks, some of which are volcanoes, like Pasto, Galeras, and Cumbal. The area of this study is delimited on the west by the valley of the Patía River and by the Cuembi, Nambi, and Cuaiquer Rivers, and on the east by the divide between the rivers running to the Pacific Ocean and those flowing eastward into the Caquetá and Putumayo Rivers.

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[3] For the languages, see especially Jijón y Caamaño, 1940–41; Castillo i Orosco, 1878; and Castellví, 1934. For ethnology, see Douay, 1900; Pittier de Fábrega, 1907; Ortíz, 1935; Guerra F., 1942; Jijón y Caamaño, 1936–38· Otero, 1938; Albís, 1934. See also Languages, pp. 921–922.

All this region is cool to temperate throughout the year, the extremes being at Túquerres, which lies at 3,104 m. (9,433 feet) elevation and has a mean temperature of 11° C., and Ancuyá at 1,358 m. (4,380 feet) with a mean temperature of 21° C. The greater part of the population lives between 2,890 m. (about 9,470 feet) with 12° C., as at Ipiales, and 2,020 m. (about 6,630 feet) with 18° C., as at Buesaco.

Farther north, the Cordillera Central forms a great mountain mass at the sources of the Cauca and Magdalena Rivers, the latter delimiting the Cordillera Oriental, which extends toward the northeast, entering Venezuela and stopping at the Atlantic Coast. In the Department of Cauca, the native peoples occupied the altiplanos and the mountain slopes of the central portion of the Andes and of the Cordillera Central and Cordillera Oriental. Some of the mountains are snow-capped, like Coconucos (4,800 m.; 15,746 feet) and such volcanoes as Puracé (4,908 m.; 16,102 feet) and Sotará (4,580 m.; 15,026 feet). There are high páramos, swept by icy winds, where only the frailejón (*Espeletia hartwegiana*) and certain grasses grow. Below these heights, the topography is hilly and grandiose, with a succession of hills, terraces, altiplanos, ravines, cañons, and valleys.

Some tribes, like the *Coconuco* and *Moguex*, live in the cold mountain spurs toward the Cauca River; others, like the *Páez* and *Guanaca*, in the high páramos with a climate like that at Moras (3,670 m.; 12,040 feet), Guanacas (3,518 to 3,750 m.; 11,541 to 12,303 feet), Las Delicias, and other places to the east. The *Popayanense* occupy the temperate Valley of Pubén. The *Pijao* lived in the last mountains of the Cordillera Central toward the Magdalena River, which, like the valley of this river, is low and warm, and extended to the Cauca Valley in the neighborhood of Buga.

The country inhabited by the *Popayanense* at the Conquest has an altitude of 1,760 m. (5,775 ft.) and a mean temperature of 18° C.; the *Páez* in Tierradentro, 1,650 to 2,620 m. (5,774 to 8,595 ft.) and 13 to 17° C.; the *Moguex*, 2,521 m. (8,270 ft.) and 14° C. at Silvia; the *Andaquí* in the region of San Agustín, 1,695 m. (5,561 ft.) and 18° C.; the *Yalcón* and *Timaná*, 1,100 m. (3,608 ft.) and 24° C.; and the *Pijao*, 873 m. (2,864 ft.) and 25° C. at Carnicerías, and 1,700 m. (5,577 ft.) and 18° C. at Pijao (Caldas).

Such differences in climate with the consequent differences in flora and fauna contributed to the variations in economy and culture. The high peaks of the cordilleras and the deep rivers were frontiers between the tribes, clearly separating them from one another—the *Moguex* from the *Páez*, the *Páez* from the *Pijao*, the *Andaquí* from the *Tama* of Bajo Huila.

This extremely varied habitat offers a great range of food resources and of possibilities for agricultural crops. In the high, cold mountains and altiplanos, between 2,500 and 3,000 m. (about 8,200 to 9,800 ft.) elevation, where the mean temperature is 11 to 15° C., the principal crops were potatoes (*Solanum andigenum*), ullucos (*Ullucus tuberosus*), and cubios (*Tropaeolum tuberosum*). In the medium zone, between 1,600 and 2,500 m. (about 5,200 to 8,200 feet), with a temperature of 15 to 20° C., the main crop was maize (*Zea mays*), but arracacha (*Arracacia esculenta*), quinoa (*Chenopodium quinoa*), and sweet potato (*Ipomoea batatas*), were also cultivated. In the low, warm zone between 500 to 1,600 m. (about 1,600 to 5,200 feet), with a temperature of 20 to 28° C., the main crops were maize, sweet manioc or yuca (*Manihot utilissima*) and beans (*Phaseolus vulgaris*).

The cold lands also produced in addition to these principal crops, maize, squash (*Cucurbita maxima*), wild fruits, birds including ducks (Anatidae), doves (Columbidae), guans (*Penelope*), mammals such as the spectacled bear (*Tremarctos ornatus majori*), and other small, wild beasts like the armadillo (*Dasypus novemcinctus*), guaratinajo (*Dinomys branickii*), guatin (*Dasyprocta fuliginosa candelensis*), and small fish from the rivers and lakes. The guinea pig (curí or cuy, *Cavia aperea*), which is prolific in all the climates, was the only domesticated animal and is an important source of food of the modern Indians.

The inhabitants of the medium, humid zone were more favored by nature in that crops grew faster and in greater variety. In addition to the plants named, they grew achira (*Canna edulis*), auyama (*Cucurbita verrucosa*), beans (frijoles), and peanuts (*Arachis hypogaea*). Among the great variety of wild foods were fruits, granadilla (*Passiflora ligularis*), guayaba (*Psidium*), guama (*Inga* spp.), avocados (*Persea Americana*), papaya (*Carica papaya*), guanabana (*Annona muricata*), and chirimoya (*Annona cherimolia*), and such animals as deer (*Mazama rufina*, *M. gualea*, and *Odocoileus virginianus consul*), rabbits (*Sylvilagus fulvescens*), guinea pigs, various rodents, and large birds, such as chachalacas (*Ortalis*) and guans (*Penelope*).

Additional foods of the low, warm regions were sweet potatoes, beans (frijoles), and yams (*Dioscorea alata*); such fruits as pineapples (*Ananas sativus*), papaya, custard apple (*Annona squamosa*), cactus fruit (*Opuntia* spp.), and plantains (*Musa paradisaica*); and large fish from the rivers.[4]

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[4] The scientific names of the plants were taken from Cortés, 1919. The mammals were tentatively identified by Dr. Remington Kellogg, of the Division of Mammals, U. S. National Museum, and the birds by Dr. Alexander Wetmore, Secretary of the Smithsonian Institution.

TRIBAL DIVISIONS

Captain Sebastián de Belalcázar was the first conquistador who went north from Quito and entered the Andean region of what is today Colombia. He passed through the territory of the Pasto and Popayán Rivers to reach the region of Neiva and beyond in 1535–36.

At the time of their discovery, the native peoples north of Ecuador were very numerous, but the chroniclers, for example Cieza de León, who crossed this region in 1545 and is its outstanding historian, gave their locations and designations in a very confused manner. The historians classified the aboriginal peoples either according to small villages or groups of houses, slight differences of dialects, or slight cultural variations, so that the true classifications are very difficult to make.

Modern ethnological studies and a critical interpretation of the chroniclers somewhat clarify the cultural panorama of these regions, however, and it is now possible to list the following tribal divisions which existed just before the Conquest [5] (map 7):

Pasto.—The *Pasto* (*Koaiker*, *Cuaiquer*, *Quayquer*, *Coaiquer*,[6] etc.) (Jijón y Caamaño, 1936–38), who had a uniform language and culture throughout their villages, were distributed from the town of Tuza between the Mira and San Juan Rivers northward throughout the mountains to the valley of the Patía River and toward the northeast to the southern boundary of the present Department of Cauca. Eastward, they extended to the country of the *Quillacinga*, which began at the Guáitara River (Cieza, 1880, ch. 33). In the west, they occupied the western portion of Nariño, but accurate information is lacking on some tribes, which like the *Abades*, *Masteles* (Juán López de Velasco *in* Guerra, 1942) and *Patía* of the lower Patía River, lived toward the Pacific Coast region. The Angasmayo River in *Pasto* territory was the limit of the conquest of the *Inca* Guaynacapa (Cieza, 1880, ch. 37). Ortíz locates this river southeast of Nariño but other authors identify it with the Mayo River farther to the north.

There was a large number of native groups or villages within this area. Among these Cieza mentions the *Ascual*, *Mallama*, *Túcurres*, (*Tulcan*), *Zapuys*, *Iles*, *Guaimatal*, *Funes*, *Chapal*, *Males*, *Piales*, *Pupiales*, *Turca*, some of which are south of the Colombia-Ecuador border, *Cumba*, and others, and adds that, "All these peoples and chiefs had and have the name of *Pastos*" (Cieza, 1932, ch. 33). Guerra gives other names of small groups (parcialidades).

Quillacinga.—East and southeast of the *Pasto* lived the *Quillacinga*. Padre Velasco (1841–44, vol. 3) identified them with the *Pasto*, but cultural and linguistic differences between these tribes leave no doubt that Cieza de León (1880, ch. 33), was correct in considering them a distinct people. The present city of Pasto was founded in *Quillacinga* territory in the valley of Atris, which was occupied by several small groups: the *Isancales*, *Paguanes*, *Zacuampues*, *Chorros* (Velasco, 1841–44, 2:153), *Mocondino*, *Bejendino*, *Buyzaco*, *Guajanzangua*, *Mocoxonduque*, *Guacuanquer*, and *Macaxamata* (Cieza, 1932, ch. 33). *Quillacinga* territory extended from the frontier of the *Pasto* on the west, i. e., the Guáitara River, eastward to the mountain ridges from which flow the Caquetá and Putumayo Rivers. Its northern and northeastern limits are the high páramo of the Letrero and the sources of the Cauca River. Recent investigations show that it extends south to the district of Puerres (Guerra, 1942). (See also Ortíz, this volume, p. 911.)

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[5] Castellví, 1934; Guerra, 1942; Jijón y Caamaño, 1940–41; Ortíz, 1937 d, 1938 c; and Otero, 1938, 1939.

[6] The *Coaiquer* are sometimes treated as a subgroup of the *Pasto*. (See this volume, pp. 927–936, 967–968.)

Popayanense.—North of the *Quillacinga* in the province of the *Popayanense*, which is well delimited by the Cauca River valley and by the first spurs of the Cordillera Oriental and Cordillera Central, were numerous peoples who had the same general culture, although some of the first historians differentiate them. These tribes, which may collectively be called *Popayanense*, perhaps included the *Puracé*. The many small groups so lacked political unity, however, that Cieza said "That there were no men among them who were feared," i. e., they lacked chiefs.

Coconuco, Moguex, and Páez.—In the hills and small valleys of the eastern slopes of the Cordillera Central were groups of distinctive and strongly organized people. The *Coconuco*, the *Moguex* (*Guambía*), and the *Páez* lived on the eastern slope of the Cordillera, and the *Guamza* (*Guamsa*), *Malausa*, *Polindara*, *Palace*, *Tembio*, *Colaza*, *Zotara*, and *Guachicone* on the western slope of the Cordillera (Cieza, 1932, ch. 32). Linguistically and culturally,[7] these tribes were very homogeneous. There were three important subgroups: (1) the *Coconuco*, *Cotara* (*Zotara*), and *Colaza;* (2) the *Moguex* (*Guambía*), *Totoró*, and *Polindara;* (3) the *Páez*, with groups on both slopes of the Cordillera Central. (See also Lehmann, this volume, p. 969.)

Andaquí and neighboring tribes.—The *Andaquí* lived in the mountains from the source of the Magdalena River to near Timaná and south to the high ridges which form the watershed between the upper Magdalena River and the Fragua and upper Caquetá Rivers (Velasco *in* Ternaux Compans, 1840, pp. 167–68; Pérez, 1862). This zone contains the important archeological remains known as San Agustín (Arroyo, 1907). The territory of the *Yalcón* (*Cambi*) was between the headwaters of the Río de la Plata and the Magdalena River (Simón, 1882–92, vol. 4, Noticia cuarta, ch. iii). The *Timaná* were found by the conquistadors to the southeast of this region, between the Guarapas and Magdalena Rivers centering around Timaná (Velasco, *in* Ternaux Compans, 1840, 3:26). The *Páez* lived to the north of the

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[7] Jijón y Caamaño, 1936–38, 2:186; Otero, 1939.

Yalcón and *Timaná* in an area delimited by the high crests of the Cordillera Central on the west, the snowcapped peak of Huila on the north, the valley of the Páez River on the east, and the region of the Río de la Plata and the Moscopán River on the South (Cieza, 1932, ch. 32), although some groups lived in the valley of the Cauca River bordering the Cordillera on the west (Otero, 1939).

Pijao.—The *Pijao* (*Pinao*) were the strongest and most warlike neighbors of the *Páez.* They inhabited the eastern slopes of the Cordillera Central from La Plata to Ibagué, which included the region of the Río de la Plata and the left side of the Páez River, but extended to near Buga on the western slope of the Cordillera Central. The Páez River formed their frontier with the *Páez* and was their southwestern limit. They extended northward to the territory of the *Quimbaya*, and one of their divisions lived in the Cauca Valley, near Buga. (Simón, 1882–92, vol. 3, ch. 53, p. 330; vol. 4, ch. 24, p. 156; Ordoñez de Ceballos, 1938, chap. 28.) The *Pijao* were bordered on the north by the *Quimbaya* and *Panche*, on the east by the peoples occupying the hot valley of the Magdalena River, on the south by the tribes of the upper Putumayo and Caquetá Rivers, and on the west by the peoples already mentioned and by the *Gorrón* and *Lile*, near the Pacific Ocean. Near them in the Huila Plains were the *Tama.*

SOURCES

Conquest and Colonial Periods.—Acosta (1848), especially for the *Quillacina*; Aguado (1916), an account of the *Pijao*, *Páez*, and *Anabeima* written about 1570 by a Franciscan Friar; Andagoya (1892); Aragón (1930); Arroyo (1907); Belalcázar (Benalcázar) (1936), a letter written in 1549 (see also Jijón y Caamaño (1936–38); Buenaventura (1936); on Belalcázar's itinerary; Castellanos (1852); Cieza de León (1880, 1932); Colección de documentos inéditos relativos al Adelantado Capitán don Sebastián de Benalcázar (1936); Cuervo, A. B. (1894); Descobar (*in* Jijón y Caamaño, 1936–38, vol. 2); Espejo de Variedades (*in* Ternaux Compans, 1840), a soldier's account of 15 years at Quito and Popayán, written in 1575; García Borrero (1935 a, 1935 b), on Huila; Guerra F. (1942), on the *Pasto* and *Quillacinga*; Informe de Misioneros (*in* Cuervo, 1894, sec. 2, vol. 4, pp. 248–78, 500); Jijón y Caamaño (1936–38, 1939, 1940–41); Olano (1910); Ordoñez de Ceballos (1938); Otero d'Costa (1935 a, 1935 *b*); Oviedo y Valdés (1851–55); Piedrahita (1688); Posada (1910); Relaciones geográficas de Indias (1897, vols. 3, 4); Relación del Arzbispo (1910); Robledo (1936–38); Rodriguez (1684); Silvestre (1927), a manuscript dated 1789; Simón (1882–92), accounts written in 1623 and later; Tascon (1938); Velasco (1840, 1841–44).

Contemporary descriptions.—Albis (1934), describing a visit to the *Andaquí* in 1854; Bollaert (1860); Brisson (1899), good on the *Pasto*; Castellví (1934), on language groups; Castillo i Orosco (1878), on *Páez* language; Censo de la Población de la República de Colombia (1924); Cortés (1919), on the flora; Cuervo, M. C. (1920), on archeology and ethnology; Garganta Fabrega (1942), on coca; Douay (1900), on language; Jiménez (1936), on geography; Ortíz (1935), on the native communities of Jamondino and Males; Otero (1938), on the *Guanaca* and (1939) on languages in the Departamento del Cauca; Pérez (1862), on the geography of Cauca; Pittier de Fabrega (1907), on the *Páez;* Reclus (1893); Thrasher, (1860–61); and Triana (1907).

LANGUAGES

Ever since the chroniclers wrote of the Conquest, the problem of the native languages in this part of Colombia has been extremely complicated. One writer affirmed, "It is certain that there are more languages differing from another than there are leagues in the whole province" (Jijón y Caamaño, 1936–38, 2: 179–82). According to the "Relación de los Sucesos de Pedrarias Dávila," by Governor Andagoya, the Spaniards ascending the Cauca Valley found within 2 leagues east of Cali:

> There are other peoples with a different language from that of the *Lili*. In the ten leagues of the road toward Popayán there is another people of another language . . . toward the other cordillera of the mountains in the eastern part . . . the language of Popayán extends some ten leagues toward the south. And from the top of the mountains toward the valley of Timaná is another different language and ten leagues beyond [from Popayán] from one cordillera to the other there are other different languages all the way to Quito. [Cuervo, 1894, 2:113.]

But modern linguistic studies in this region have classified the languages spoken at the time of the Conquest as follows:

- *Chibchan* family
  - *Chibcha-Aruaco* group
    - *Aruaco* subgroup
      - *Andaquí* (Castellví, 1934)
  - *Talamanca-Barbacoa* group
    - *Páez* subgroup
      - *Páez, Paniquitá, Quilla*
      - *Totoró, Polindara, Moguex* (*Guambía*), *Coconuco*, and *Guanaco*
      - *Pijao, Panche, Quimbaya, Pantágora**
  - *Cochean* (*Kamsá*) family
    - *Quillacinga* subgroup (Castellví)
  - *Tucanoan* family
    - *Pasto* subgroup†

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*Castellví, 1934; *Jijón y Caamaño*, 1939; and Otero, 1939.

†Rivet cited by Guerra. Jijón y Caamaño classifies the *Pasto* or *Coaiquer* language in the *Talamanca-Barbacoa* group of the *Chibchan* family.

All the region of Popayán and of the *Páez* in the Cordillera Central thus spoke closely related and very similar dialects which were often grouped. For example, the dialects of the *Pijao, Páez, Timaná,* and *Yalcón* were classed together. In the south, an area of the *Pasto* language extended to Ecuador. Between the *Pasto* and *Páez,* bordering also on the *Pijao,* the native peoples spoke *Quillacinga* and *Andaquí.*

Of all these languages, there survive today only *Páez,* which is spoken in Tierradentro, and its dialect, *Paniquitá,* on the western slope of the Cordillera Central in Toribío, Caldono, Jambaló, and in parts of Silvia and Totoró. *Moguex* and the related *Totoró* and *Polindara* are spoken in Silvia and in the regions of Totoró and Polindara, according to Otero. *Andaquí* is spoken by only a few scattered groups surviving in the lower region of the Caquetá River.

HISTORY

After Don Sebastián de Belalcázar founded the City of Quito, he sent Diego de Tapia on a voyage of exploration toward the north in 1535 (Otero d'Costa, 1935 a). This expedition discovered the new lands of the Cordillera as far as the large Quillacinga River, today the Carchi River. This river became the point of departure for important travels in the same year by Pedro de Añasco, and in 1536 by Belalcázar, who founded Cali and Popayán, both key points for future expeditions and discoveries. These were the first White contacts with the Andean tribes of southern Colombia. In 1538, Belalcázar undertook a second expedition from Quito, crossing the Cordillera through *Páez* territory and then passing among the *Pijao* Indians. Both tribes resisted him with their feeble arms. He continued toward the east until he met the expeditions of Jiménez de Quesada and Federman at Bogotá. With the foundation of outposts by Jiménez de Quesada in the lands called the New Kingdom of Granada, Añasco was sent back to found Timaná in the territory of the *Timaná* and *Yalcón.* This city was to be the base for communications between Perú, Quito, Popayán, and Santa Fé de Bogotá.

The *Pasto* and *Quillacinga,* after a few encounters with the Spanish soldiers, in which they always suffered bloody defeats because of the weakness of their weapons (arrows, lances, wooden swords, and sometimes slings) and because the Spaniards used horses and hunting dogs, began to surrender. The inhabitants of the Valley of Popayán, who were poor warriors, also ceased to struggle. These tribes had previously suffered the *Inca* invasion, which had extended north to the Angasmayo River, which washed their lands. But the *Páez, Moguex, Andaquí,* and *Pijao,* thanks to the rugged mountains in their territory and to their more bellicose character and better organization, presented a serious obstacle to the Spaniards' ideal route, which had been drawn by Belalcázar between the Kingdom of Quito and Bogotá. Few Spaniards wished to adventure through these wild lands where the Indians were strong and ambushed them. The founders of Timaná were constantly attacked, and the frightening legend of cannibalism began to spread. It was said that Spaniards were the preferred victims, and that the Indians considered the flesh of enemies the finest morsels in their great victory feasts. The soldiers collected some gold in the so-called penetrations (entradas) of the country—attacks really made to kill the natives, to destroy their crops, and to burn their houses. All of this made the Indians resist more strongly, but it was necessary to clear the road to Santa Fé, and the war of extermination went on without respite. Belalcázar himself returned to *Páez* territory and was defeated at the rocky cliff of Talagá in 1541, only to return with more than 200 soldiers, of whom 100 had horses, and spread blood and fire among the Indian villages. But the Indians made reprisals. They assailed Timaná and killed its mayor, after putting out his eyes and leading him through the market places with a cord passed through his face. This act of vengeance was to satisfy Gaitana, a valiant warlike Indian woman who had formed various Indian alliances against the Spaniards because they burned her son. In 1543, the *Pijao* destroyed the town of Los Angeles, recently founded in the Neiva Valley. They continually attacked the area surrounding Ibagué, but many of them were defeated and killed in 1556 in the plains of Chaparral by Francisco de Trejo's troops. Both Spaniards and Indians were stubborn in their struggles, the Indians being unwilling to make peace as long as they were being killed and their crops destroyed.

The struggle was rekindled in 1562 when Captain Domingo Lozano, having requested the privilege of conquering the Indians, organized an army and entered *Páez* territory. He founded the town of San Vicente de Páez near Huila Mountain in order to ensure Spanish domination of the heart of the country. But the Indians ambushed his soldiers and gradually killed off the cavalry, the Spaniards' strongest troops. Eventually, they destroyed San Vicente and again controlled their own rugged lands. The *Pijao*, meanwhile, fought to the death. They destroyed Villa Vieja or Neiva in 1569 and, allied with the *Páez*, took San Sebastián de la Plata in 1577, killing all its inhabitants and burning the houses. They finally put an end to and avenged the Spaniards' exploitation of a silver mine which had been discovered in *Moscopan* and *Yalcón* territory in 1551.

Fleeing Spanish pressure which extended from Timaná toward the heart of the Andes, the *Andaquí*, exhausted by the wars, followed the high hills to the east, and began in 1564 to descend toward the Caquetá River.

The King of Spain, receiving word of the troubles in this region, ordered Don Juan de Borja, his Governor at Santa Fé, to carry out the "pacification of the province," meaning the extermination of its inhabitants. The decisive war started in Chaparral in 1605 and ended in 1608 when a Spanish witness wrote of this territory, where the *Páez* had remained free for so many years, that the provinces "were so desolated that the troops could not find Indians to fight, houses to plunder, or roots or grain to eat, and, if some Indian remained, instead of daring to plant boldly, he sowed four handfuls of grain here, two more there in the shadows and cover of the trees . . . they went about harrassed, thin, and emaciated until life was ended, for the soldiers saw corpses of people dead of hunger or sickness at every step" (Simón, 1882–92, Septima Noticia, ch. 49, vol. 5, pp. 314–15). A document in the ecclesiastical archives of Páez, dated July 17, 1638, states that in the lands adjoining the *Páez* there lived a *Pijao* Indian named Ambrosio, who had said that Captain Andrés de Zúñiga could now well enjoy this country because there were *Pijao* but not *Páez* Indians in it and because the *Pijáo* saw themselves doomed and the land had no proprietor.

The *Guanaca*, who, because their chief was an enemy of the *Páez* chief, had allied themselves with the Spaniards in order to attack the *Páez*, were the first to surrender and join a Spanish colony. The first road between Popayán and Santa Fé passed through their territory, where the Spaniards established a hostelry for traders. This district was given to the Jesuits, who established the Church of Guanacas and, later, a town of the same name. But the Indians felt another lethal force of European origin—disease which they were unable to withstand. In 1790, a smallpox epidemic so reduced them that they abandoned their town, and the few survivors retired to the narrow mesa, where the modern town of Inza is situated. Here they gradually disappeared altogether.

The *Páez* continued to resist and defend their lands against Spanish missionization, so that the road to Guanaca never became secure. The extinction of the *Pijao*, the lack of important quantities of gold in the area, and the difficulty of the terrain, which was such that the Chronicler Pedro de Aguado said "to travel through *Páez* territory is to go up and down," caused the Spaniards to abandon interest in dominating these peoples. They were content to establish the Guanacas mission, and, a little later, the parish of Tálaga. Subsequently, as these Indians, who were isolated in their high mountains, were allowed to retain their customs and beliefs without interference, they did not protest when small groups of Whites peacefully occupied certain places in their lands.

Thus began the true Colonial Period for those tribes which survived the wars of the Conquest. The encomienda system was inaugurated, in which a Spaniard held a territory occupied by Indians. The natives, under a chief who was protected by the White authorities and who made contact between the master, or encomendero, and his subjects, had to give a certain number of days' work and a specified tribute in products of the lands, animals, gold, or manufactures. The encomiendas made no effort to Hispanicize the Indians, but continued to loot and massacre them. The Indians, reduced to utter misery, gave up all their artistic and industrial activities, and devoted the greater part of their time to the service of the master or to seeking products to pay the obligatory tribute. To remedy this situation, the Spanish Crown decreed the native "parcialidad," giving surviving groups reservations and prohibiting their employment in transporting men and goods over the highways. This reform was never entirely carried out, however, and the Indians, in spite of having their own government, the cabildo or Indian council, continued in servitude or debt slavery.

The native Indian government consisted generally of a governor, a first mayor (alcalde mayor), a second mayor (alcalde segundo), a trustee (sindico or fiscal), and constables (alguaciles), the last a kind of police who transmitted to the people the orders which the Whites gave through the governors or mayors, and who carried out penalties of imprisonment, of placing in stocks, and whipping, which the first Spaniards introduced into the punishment of the natives. At the same time, the Christianization of the Indians began. It succeeded in an imperfect way, however, for the Indian attended Masses, arranged and participated in processions, and did not miss the solemn ceremonies a single Sunday largely because on the same day he brought his own products to the pueblo for sale, bought salt or meat which he needed, and devoted himself to drinking chicha, the traditional drink which he had always taken on religious or social occasions.

The Indians of Nariño, descendants of the *Pasto*, lost their language and many of their customs during the Colonial Period, although they continued to live as natives on their reservations, which daily became smaller because of the encroachments by the neighboring Whites or Mestizos. They became farmers with small landholdings and, occasionally, masons in the cities. The *Moguex* and *Páez*, however, retained their language and the greater part of their customs. Some of them, especially the men who had to deal with the Whites, learned a little Spanish, and they continued throughout the Colonial Period to defend their lands and their traditions. To religious practices introduced by the missionaries, they added such elements as the offer of food to the souls of the dead. They added to the Colonial council (cabildo) the office of captain, an official who, unlike the rest of the council, was not responsible to civilian authorities but had life tenure, sometimes a hereditary position, and more authority within the group.

The captain was, therefore, like the aboriginal hereditary cacique, the chief of each aboriginal group.

The decrease of the native population was accelerated until, in the Province of Popayán, according to "Descripción del Reyno de Santa Fé de Bogotá," by Francisco Silvestre (1927), there were in 1789 only 64,463 inhabitants—3,603 families of Whites, 6,022 of Indians, 4,793 of freemen (Negroes), and 3,247 slaves (Negroes), who worked in the mines and haciendas and replaced the Indians, who were disappearing. When the revolution against Spain began, the various groups of Indians in this region behaved very differently, each according to the disposition previously shown. The *Pasto* followed the Spanish troops, forming a royalist unit that was difficult to conquer, whereas the *Páez* took the part of the Republic and were led by the celebrated Indian Chief, Gregorio Calambás, who was shot by Warleta, and thus became a martyr of Colombian Independence.

With the consolidation of the Republic, the laws of Colombia established reservations for the Indians, but the neglect and exploitation characteristic of the Colonial Period continued, and there were only a few missions. There has not been contemplated until now any economic, cultural, or sanitary betterment of these natives. Most of them finally have disappeared, vanquished by diseases, by economic want, which the new necessities created and contact with civilization aggravated, and by the shrinkage of their reservation lands through the ambition of those who made it a policy to break up the native communities through official subdivision of their lands.

THE CULTURE OF THE PASTO, COAIQUER, QUILLACINGA, AND POPAYANENSE

The *Pasto* or *Coaiquer*, the *Quillacinga*, and the *Popayanense* formed a culturally homogeneous group at the time of the Conquest and later experienced very similar acculturation.

SUBSISTENCE ACTIVITIES

Farming.—Subsistence was based on intensive horticulture. Each family had its own small fields and grew potatoes and other tubers, xíquimas, a grain which Cieza calls cebada, quinio or quinoa, and maize, of which there was little in *Pasto* territory but much elsewhere.

A simple, pointed stick is used today in Nariño for planting.

The historians do not mention communal work in agriculture, but probably it was carried out in the form of labor loans (minga) between individuals, as today in Nariño and Cauca. The beneficiary of help in harvesting crops has to give each helper a basketful of the produce, a form of compensation called "chindé." He is also obligated to give similar help to the others. This communal labor is more solemn when the Indians work and plant the lands of the church, the products of which are destined for the cult of some saint, and the lands of the public school. Such labor is performed today in Nariño and in much of Cauca, where this ecclesiastic tribute has continued from Colonial times.

The small plot which, in *Pasto* territory, generally surrounds each country house is usually cultivated by the women, although it is prepared for planting and the heavy, long work is done by the men.

Wild foods.—The Indians collected wild fruits, such as pineapples, granadillas, and others which were common in the moderate and cool climates, and hunted deer, rabbits, partridges, pigeons, doves, pheasants, and turkeys. The only domesticated animal was the guinea pig, which they ate.

It is claimed that the *Pasto* and *Quillacinga* ate body lice and that the *Inca* Emperor, Huayna Capac, upon extending his conquests to this territory, obliged them to pay a monthly tribute consisting of a tube full of lice so as to put a stop to this widespread American Indian custom. Today, the descendants of the *Pasto* continue the custom, and it is not uncommon to see people on the country ranches picking lice from one another and eating them.

Salt springs supplied much salt, which was used in trade.

Coca and lime were probably eaten at the time of the Conquest, and are used today to allay hunger and fatigue. (See Narcotics, p. 934.)

HOUSES AND VILLAGES

The *Pasto* constructed nothing but dwellings, the original types being called bohio [8] (grass huts), the exact nature of which is not known. In the post-Contact Period, they adopted the simple house (rancho), called "bahareque," which is made of thin poles and canes tied together with the spaces between them filled with mud and sometimes with small rocks, and is roofed with grass. These houses consist of one large rectangular room; in the corner are three stones over which to cook. Furniture is limited to small wooden benches and platform beds (barbacoas), constructed on stakes driven into the ground supporting horizontal poles or a dried cowhide. Next to the main room is a small one where the image of the family saint is kept, and where clothes and possessions are stored in chests or boxes.

The habitations of Popayán are better known. These were always built of plant materials. The town of Popayán had several circular houses of wood and grass or cane leaves, which stood a short distance from one another. There was a large high-roofed temple or meeting house with sides constructed of 400 poles each, each pole a vara (32 in.) in diameter. At the entrance of each native village, there was a large construction, 50 paces to a side, made of thick bamboo trunks, like a fence or fort, and provided with two narrow doors, which opened to the east and west respectively.

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[8] Collier considers this a large, circular, turf-walled structure with a sunken floor (p. 769).

Between Cali and Popayán, the common habitations had special, small, circular huts used exclusively by menstruating women.

ENGINEERING WORKS

Ancient engineering works consisted only of wooden bridges and "bejucos" (lianas), aerial cables, which the Spaniards described as "thick ropes for passing the rivers."

TRANSPORTATION

Although the *Inca* extended their dominion to the southern part of *Pasto* and *Quillacinga* territory, the llama seems not to have reached Colombia. For a long time before the Conquest and for many years after it, transportation was done entirely by human beings. As late as 1897, burdens and travelers were carried on the backs of Indians over narrow and difficult roads, and even Indian women transported large burdens (Brisson, 1899, ch. 1). Today, however, horse trails and automobile roads penetrate the territory all the way to Ecuador.

DRESS AND ORNAMENTS

Clothing.—As most of *Pasto* territory is cold, men wore a woven mantle (manta) four varas (10 ft. 8 in.) long, wrapped around the waist, with a free part pulled up over the head. Under this, they wore a small loincloth, which Cieza calls "maures," as a guayuco, or genital cover. *Pasto* women wore a narrow mantle (manta) which covered them from the breast to the knees, with a smaller blanket over it. The *Quillacinga* used genital covers (small "maures"), but had more developed men's garments in that they were sewed. They sewed a broad blanket or mantle down the sides, leaving wide lateral arm apertures. Women wore a small blanket wrapped around the waist and over it another which covered the back and fell over the breasts, being held by two corners tied around the neck. In some villages in the Province of Popayán, according to Andagoya (*in* Cuervo, 1894, 2:114), men sometimes wore elaborately painted cotton blankets, "a manera de capa hechada por debajo del brazo, corta, que no pasaba de las nalgas," but they usually went naked or else wore a small blanket, which was the more customary woman's garment. This light dress is explainable by the temperate climate.

Around Pasto, the present Indian dress consists of a hard, woolen hat, adopted from Ecuador; a linen (lienzo) shirt decorated on the breast; heavy woolen pants, two of which are sometimes worn at once; and a poncho, or ruana. Women wear a hat, a scarf over the head, a shawl or mantle, a much-decorated linen shirt with large sleeves, and woolen bayeta skirts, of which at least three and sometimes as many as eight are worn to make up the "follado." The interior skirt of the "follado" is called "cunchina;" the others, "cunchi;" and the fiesta skirt, the "bolsicón." They part the hair to wear two braids, and use a short necklace.

Ornaments.—The *Pasto*, according to the historians, were very "simple" and "dirty," "simple" probably meaning that they used few ornaments and "dirty," that they seldom changed their cloaks. In the region of Almaguer, they had long hair. The name *Quillacinga*, "moon in the nose," reveals the custom of wearing a crescent-shaped golden nose ornament. Farther north, in the Province of Popayán, however, both sexes wore necklaces and other ornaments of gold. The men of Popayán were famous for going to war naked, with their face, arms, and legs painted red, black, and yellow, with crowns of parrot feathers on their heads, and with necklaces, bracelets, and breastplates, which the Spaniards called "patenas."

MANUFACTURES

Details of the native technology of this region were not recorded, and only a few utensils and implements were mentioned by the historians, although many objects, such as pottery, stone utensils—grinders, axes, and scrapers—and some textiles are found archeologically.

Bark cloth.—The *Pasto* used bark cloth to make apparel like the blankets "hechas de yerbas," which must have been similar to the rain cloaks made today. The latter consist of bundles of straw tied over a network of hemp.

Lacquerwork.—The *Pasto* were and are notable for the preparation and use of "varnish of Pasto," a resin extracted from the fruit of "mopa-mopa" (*Elaeagia utilis*), which comes from the region of Mocoa. It is used as follows:

> The glutinous kernel of the fruit is chewed and, when it has the correct consistency, it is mixed separately with all colors and shades and spread in large sheets, thinner than the thinnest paper of China. They make similar sheets of beaten silver and gold, with the varnish on both sides. Experts puncture or cut these with figures of various dimensions, and proportions and place them in diverse boxes. When they are ready, they paint whatever they want over wooden articles, calashes, or metals. On a background of a single color, they paint over it diverse colors, gold and silver, trees, fruits, and animals. Sometimes they steam the perforated varnish to make it adhere more firmly, so that nothing can damage it and it even is resistent to hot water, retaining a beautiful luster. [Velasco, 1841–44, 1:38–39.]

Metallurgy.—Here as almost everywhere else in Colombia, ornaments were made of pure gold or of what the Spaniards called "gold of low order" (oro de baja ley), which is an alloy of gold and copper mixed in varying proportions to obtain distinct colors and degrees of hardness. They made small figurines and objects of personal adornment but did not make utensils. They worked the metal by melting and casting it or by hammering it into thin sheets. They did not know how to smelt iron.

Weaving.—The native Indians wove cotton textiles for clothing. It appears that their loom was vertical, supported by poles, like that which the modern Indians use to weave woolen blankets, bayetas, and ponchos.

Weapons.—Among the *Pasto*, a peaceable people, the only weapons mentioned by chroniclers are stones thrown by hand, wooden clubs (macanas or mazas), and a few poorly made wooden lances. In the Province of Popayán, the Indians fought with "sticks of black wood, a fathom and a half long and four fingers wide, called macanas," darts with fire-hardened points cast by means of the spear thrower, stones thrown with slings, and long lances (astas) with fire-hardened points. Thus, the lance was used most in Popayán, the only place to use the spear thrower, whereas the macana and sling were common to the whole region.

There appear to have been no weapons of stone, except the projectiles already mentioned. Polished stone axes have been found archeologically throughout this region, although there are relatively few in central Colombia.

For defense, the Indians carried well-made painted shields (rodelas), presumably of wood.

MARKETS

Each native family produced its own food and essential goods, but a few products, like salt, had to be obtained through trade or at intertribal markets. The chroniclers merely mention that the *Pasto* traded with the Province of Chapanchita and with their neighbors, but tell nothing of the nature of the commerce.

SOCIAL AND POLITICAL ORGANIZATION

Lack of early reference material prevents adequate characterization of the social and political organization of these people. Cieza tells us that they had no government, and that "among them there were no lords to be feared" (Cieza, 1880, ch. 13). It would seem, therefore, that each of the groups or communities into which the *Pasto*, *Quillacinga*, *Coconuco*, and *Popayanense* were divided had its own independent cacique or local chief. This would account to a large extent for their rapid subjugation by the Spaniards.

Matrilineal descent is suggested by the fact that a chief was succeeded by his sister's son and that "in some places" the first male child born to a woman was sacrificed (Jijón y Caamaño, 1936–38, 2:179–82).

Land must have been common property to be allotted by the chief. Personal property, including dwellings, was private property. It is stated that at death an individual was "buried with all he possessed." The large buildings where they met or worshiped in the Province of Popayán were, however, communal property.

Preserving the political and social structure of small groups, as as well as the concept that some properties should belong to the community, parcilidades were formed in the Colonial Period under the rule of a cabildo, or a municipal council, of Spanish origin. In Nariño today the council consists of an alcalde mayor, or mayor; an alcalde segundo, or deputy mayor; a regidor, or alderman; an alguacil, or constable; a fiscal, or prosecutor; a fiscalito, or deputy prosecutor; and one or two policemen. They are all elected in the presence of the parochial curate and are given staffs of authority with silver handles. They rule or serve without remuneration for one year, and act as links between the civilized authorities and the Indians. They arrange for the Indians to work 5 days each year for the municipality cleaning the plazas and yards of the churches, and decorating the streets for processions. The cabildo likewise allots the land to the members of the group, allocates costs for public works, and represents the group in their prolonged lawsuits over the land.

Besides the tracts of farmland allotted by the cabildo to each family, there is other land which everybody is required to cultivate for the benefit of the Church and school. There is also a tract called común del monte (common land on the hill), where all have the right to gather wood and graze their animals (Ortíz, 1935).

Today, the man is the family head, and enjoys extensive rights over his children and even over his wife. If she works, he controls her wages. When returning from the weekly market in the village, she generally walks, carrying the goods bought, while the husband rides his horse or mule.

LIFE CYCLE

Childbirth.—Except for infanticide of the first son born, practiced in the Province of Popayán, no information is available on childbirth.

Puberty.—In the Province of Popayán, women were confined during their first and subsequent menstrual periods in a small, circular building which men never entered. Their meals were left at the door.

Marriage.—Several marriage customs are recorded for southern Colombia, but tribes are not specified. In some places, a mother deflowered her daughter with her fingers before marriage. Of another place, it is stated that a man wishing to marry invited several eligible girls and their parents to a feast which lasted from 15 to 20 days. He had sexual intercourse with a different girl each day, and finally married the one he liked best, or who seemed to have become pregnant. In certain places, it is said, the prospective husband had to give something to the parents of the bride-elect, and help them in their work for some time before he could marry their daughter.[9]

Polygyny was common and was limited only by the ability of the man to feed his wives. Regarding the position of married women, it is known that in certain sections of the Province of Popayán a husband countenanced his wife's sexual intercourse with other men provided she were paid.

Among the modern *Pasto*, custom requires that a couple's parents arrange their marriage and that the bridegroom's parents present foodstuffs to the girl's. In spite of opposition by the Catholic priests, they still practice trial marriage, which they call año de amaño (year of adjustment), to ascertain whether the woman is able to bear children and to do her share of the work. The wedding is celebrated by dancing in couples, drinking chicha and hard liquor, and eating food and sweetmeats.

Sickness and death.—Because sickness was thought to be caused by witchcraft, in some of the villages sick persons were abandoned or moved to a different place. When death occurred, the *Pasto* and *Quillacinga* buried the body in large and deep graves together with food, jars of chicha, and the deceased's clothes, utensils, and ornaments. A chief was buried with several of his wives and tribesmen, who had been made drunk. Furthermore, each neighboring chief had to send two or three of his people to be buried with the dead chieftain. The deceased was thought to live after death in a pleasant and comfortable place. In Popayán, the corpses were cremated or desiccated (mummified) over a slow fire, and subsequently either buried or kept above ground.

WARFARE

Although the *Pasto* were peace-loving, the other Indians of the Province of Popayán were exceedingly warlike, so that there was constant fighting among the tribes. Women went to war with their men, carrying the darts or arrows and handing them to the men during the engagements. Men fought naked, with their bodies painted and ornamented with feathers, tufts, necklaces, bracelets, and breastplates and nose ornaments of gold. They started an attack with yells, songs, and music. Enemies who were killed or taken prisoner were partly eaten, but their skulls were kept as trophies, placed on top of high posts at the entrance of their dwellings. The victim's skin was dried, filled with ashes so that it would retain the shape of the body, and kept against the walls. Sometimes, however, the skin was used for drumheads. Cannibalism of slain enemies was also common among the *Coconuco* and the other tribes of the Province of Popayán.

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[9] From the manuscript, "Espejo de Variedades," written in 1575 by a soldier who lived in Quito and Popayán for more than 15 years. Ternaux Compans, 1840, pp. 75–82.

ESTHETIC AND RECREATIONAL ACTIVITIES

Art.—Art mediums were afforded by multicolor paintings on weapons and shields, designs painted on warriors' bodies before battle (Province of Popayán), gold jewelry, golden or wooden idols, and pottery decoration. Detailed information on the art styles and technological processes is lacking. A special art technique, however, is the so-called "Pasto varnish," which is peculiar to these Indians. They still use it, although foreign influence is apparent in their work. (See p. 934.)

Dances.—All the tribes in this region had dances which were connected with religious rites. The *Pasto* held general festivals (taquíes) in the village plazas, where for 3 days they danced, got drunk, worshiped their idols, even killed each other, and had sexual intercourse without regard to degree of consanguinity. Ceremonial dances continued during Colonial times, under cover of Catholic rites. As recently as 1897, the *Pasto* still danced during religious processions, adorned with ribbons, buttons, ornaments of sheet tin, and colored scarves. When anyone died, they held religious dances which lasted several days.

Music.—The Indians danced to the accompaniment of musical instruments and singing (pls. 188, 189). At the time of the Conquest, they used flutes, probably made of cane, bone, and very large sea shells, called "fotutos" in the Province of Popayán. The last were known by the same name almost everywhere in Colombia, especially among the *Chibchan* groups. They disappeared during the Colonial Period, but flutes survive today among Indians and country people, who play them together with wooden drums with animal-skin heads, and string instruments of Spanish origin, such as the guitar and the tiple.

Narcotics and drinks.—Coca leaves were chewed with powdered lime, called "mambe," to relieve hunger and produce a feeling of vigor and strength. The use of this narcotic increased under the encouragement of plantation owners after the Colonial Period. Incomplete statistics for 1940 show that in the Department of Cauca alone 321.5 hectares (321,500 acres) of coca were cultivated, yielding a crop of 158,454 kilograms (about 1,742 tons) of leaves, 127,978 kilograms (about 1,408 tons) of which were consumed. In the Nariño region, the consumption of coca is very important in the Cumbal, Mayasquer, La Cruz, and San Martín sections (Garganta Fábrega, 1942).

Tobacco, which is not mentioned by the historians in this section at the time of the Conquest, is widely used today, although persons addicted to chewing coca do not smoke.

Chicha made of maize was widely used, particularly during religious and community ceremonies, all of which ended in general drunkenness. It was also customary to put some of it in graves. This alcoholic drink was not used daily as a habit, as is the case today. The modern Indians also take hard liquor, which those of the Nariño region call "calaguasca." It is generally illegally distilled, since its production is a monopoly of the states or departments of Colombia.

RELIGION AND MAGIC

The first historians state that the Indians had neither temples nor beliefs, and Cieza and Velasco deny that the *Quillacinga* had any religious ideas.

Tribes of the Province of Pasto and in neighboring provinces, however, practiced religious sacrifices known as "taquíes," that is, a general 3-day celebration with dancing, image-worship, and drinking. There were priests who had direct communication with the deities. Cieza states that "some talk with the devil," as the Catholic Spaniards called the Indian deities (Cieza, 1932).

Magic was among their religious practices. They believed in birds of omen; e. g., if a bird called "solitario" should alight on the roof of a house and call once, it meant that one of the spouses living there would die, and if it called twice, both husband and wife would die. The "pucungu" bird foretold death, and the "cuclillo," according to the number of times it sang, foretold good or bad weather for farming. They also believed that whoever saw a certain snake would die instantly (Velasco, 1841–44, vol. 1).

In the Popayán section, the Indians kept metal and wooden idols in their homes. They are accredited with priests, the belief that the souls of the dead were reincarnated in newborn children, and the performance of annual dances called "areitos," which lasted several days and were accompanied by drinking and singing.

The *Coconuco* worshiped the moon (Puil), an evil power; the sun (Puitcher), a benefactor; "Pansig"; the stars (Sil); and the planets (Silg or Sull) (Bollaert, 1860, pp. 5–6).

The present-day Nariño Indians celebrate when the last bundle of straw is placed on the roof of a house to insure its permanence and to bring good luck (Ortíz, 1935).

Shamanism.—Today, the Indians of the Nariño region believe that diseases are caused by influences called "mal viento" or "mal de ojo" (evil eye), over which the shaman (curandero) has power. When a shaman is called, he fights the disease or "cleanses the sick person" by sucking various parts of his body, by blowing on him the drug he has been chewing, by cutting at the air with the blade of a machete, and by walking around the sick person holding a burning log in hand.

LORE AND LEARNING

The possession of some scientific knowledge is evidenced by the fact that *Coconuco* distinguished between the heavenly bodies, measured time by the lunar month (Canapuil), had a system of counting in groups of seven units, and that, in common with other peoples in the Province of Popayán, they used a kind of quipu, or cord with colored knots to record events or times.

THE CULTURE OF THE ANDAQUÍ

According to Velasco, the *Andaquí* left the headwaters of the Magdalena River in 1564 in their flight from the conquerors who had settled in Timaná and, having traveled on the Fragua and Pescado Rivers, went eastward down the mountains to the jungle of the Caquetá River and broke up into several groups. Their numbers decreased gradually and in 1851 only 630 survived, but their hostility to other tribes and to the Whites had not abated. In this warlike attitude they closely resemble the *Pijao*, and make the ethnographic details we possess very interesting.[10] Some authors, beginning with Felipe Pérez (1862), have maintained that the culture found archeologically in San Agustín is attributable to the *Andaquí*, and that the stone statues found there were made by them. Archeological excavations have proved, however, that, subsequent to the period to which the statues belong, that territory was occupied by an altogether different people, who must have been the *Andaquí*.

Castellví classifies the *Andaquí* linguistically in the *Chibcha-Aruacan* family, *Aruaco* subgroup. In the opinion of a modern historian (García Borrero, 1935 a, ch. 7), the *Andaquí* had 27 communities, which, however, included the *Timaná* and the *Yalcón*, neither of which has yet been well identified.

The only known fact about *Andaquí* ethnology of the time of the Conquest is that they used very large spears, as reported by Velasco. Their culture was not described until 1854, when they still kept aloof from the Spanish culture and clung to their ancient customs.

They farmed and hunted. All the members of a group came together to plant both bitter and sweet manioc (cassava), yams, maize, and sugarcane. They ate fruits, especially pineapple and the custard apple, a certain worm, snails, ants, and a large wood borer (comején grande), and drank chicha. They used a vegetable poison to hunt animals. The wooden spear was their favorite weapon.

The women raised wild animals and sold them for silver coins which they worked into triangular earrings.

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[10] Information given by missionaries on September 17, 1773, and in September 1851 in Cuervo, 1894, secc. 2, vol. 4, pp. 248–78, 500. Relación del Arzobispo—Obispo de Córdoba a su sucessor. Año 1789. *In* Posada. 1910.

Today the special industry is the extraction of oil from the "mil pesos" palm. Hunting and war are the principal occupations of the men. They involve very important rites conducted by the captain or cacique, assisted by a deputy or second in command of a group. These rites are performed as follows (Albis, 1934):

> In preparing for an attack on the *Witoto*, the deputy captain takes his men to hunt animals, while the women prepare chicha and "caguana." Upon their return, the hunters adorn themselves, dance, and drink chicha, and then go to their houses. The following day they catch "conga" ants, whose bite causes fever, and place them in a palm-leaf mat so that their heads stick out. The captain's wife picks up the mat and lets the ants bite her husband on his legs to make him strong, on his breast to make him brave, on his face to prevent him from sleeping, and on the chin to make him silent. The captains then make the ants bite the back and legs of the women, so that young *Witoto* prisoners will be diligent helpers. Afterward the captains each eat three ants mixed with water. If they have pains, the hunt will be successful. After this, the captain, carrying a turtle shell, speaks to the women, admonishing and scolding them, and then retires to a separate house, where he holds a conference with his men, forecasting the probable outcome of the fight and exhorting the men to avenge those who may be killed by the *Witoto*. That night they hold ritual dances and mimic animals. Two balsa-wood images are placed at the door of the main building and two Indians must pierce them with their spears while running. These two Indians are whipped after their feat by all those present. At dawn they plant a pole in the middle of the yard or square, pour water around it, and dance there until they have made mud, and then spend the day gathering food for the departing warriors. In order to be strong and to capture many young *Witoto*, each warrior has to place an arm in a bag full of "yuco" ants until it is thoroughly bitten. Upon departing, the captain gives his wife a knotted hemp cord (a kind of quipu). She unties a knot every night and thus knows when to expect him back and on what day the fight will take place. The day of the battle she remains in the hut where the hunters stayed the first day; otherwise they will be unable to capture any *Witoto* children. With other women she waits there 3 days for the men to return and then, after leaving there an "araraita," a palm branch, the women return to their homes to prepare more chicha. If the expedition is successful, the men return with great demonstrations of joy, but if it fails, they hit everything and bemoan their luck. The captain's principal wife upbraids her husband. After a community meal, all go home and resume their occupations.

Menstruating women throughout this area remain in a special house weaving hemp. They may have no visitors. At the end of the period, they bathe and return to their dwellings.

At childbirth, a woman must remain at home 3 months, while her husband stays in his hammock, refraining from labor and dieting lest his child die. After 3 months the parents anoint themselves and child with "jagua" fruit and resume normal life.

THE CULTURE OF THE MOGUEX AND PÁEZ

Although the *Moguex* and *Páez* have distinct territories and different dialects, their ethnology may be described together because of the great similarity of their economy with its agricultural basis, their social organization, and their general culture.

SUBSISTENCE ACTIVITIES

Farming.—The main subsistence of these tribes was and still is based on the cultivation of potatoes, which grow in great quantities in the higher portions of the territory known as Tierradentro, and maize, which is acclimated to the temperate and cold zones. There are three varieties of maize: sweet, soft, and hard. Additional crops were and are yuca or manioc, sweet potatoes, auyamas, ullucos, purutos, frijoles, arracacha, and various other vegetables, and a variety of fruits, including bananas, guayavas, avocados, papayas, pineapples, and passion fruit. Today the *Páez* and *Moguex* are beginning to grow wheat, coffee, which is an important item in their economy, and sugarcane, from which is made a coarse sugar and molasses for their fermented drink, guarapo.

The men and women of each family generally cultivate the family plot, but for large-scale maize or coffee planting, and for cultivation of the lands of the Church or saint, they work communally, and have meetings called "mingas." Communal work for any particular individual is truly loaned labor, with obligatory recompense. The beneficiary must feed his helpers, generally sacrificing a pig and preparing great quantities of chicha for the libations and nocturnal dances after the work. All adults must participate in working the Church lands, but each brings his own food.

Implements of cultivation are the digging stick, or macana, for making holes for planting, machetes and axes for destroying vegetation, and picks and shovels for removing earth, except where replaced by plows pulled by animal traction.

Domesticated animals.—Domesticated animals include chickens, turkeys, some pigs, dogs, and a few horses and cows. All but the turkeys are of European origin. These animals are rarely sold or killed for food, except for feast days, magical ceremonies, meetings, and visits of relatives, friends or distinguished White men. But sometimes the Indians buy meat in the weekly market and hang it over the hearth, where it is preserved by the smoke.

A custom which has persisted since the beginning of the Colonial Period is that of always giving a guest the "camarico" or "cariño" (affection), a present varying from an egg to a chicken, together with some potatoes, vegetables, and coffee beans.

Formerly, meat was obtained from wild rather than domesticated animals—boars (zaínos), guaras, guatines, birds, and guinea pigs, the last being true domesticated animals kept in some numbers in the native houses.

Food preparation.—Food was cooked in pottery ollas, but metal and enamel ware is now often used. The *Páez* make "mute," a soup of boiled maize, cabbage, squash, and potatoes, and "cocido," a soup of manioc, arracacha, potatoes, beans, sweet maize, and pieces of meat. Meat is sometimes roasted. Maize, the staple, is made into tortillas or soup, or is roasted on the ear. Coffee, much of which is consumed, is roasted in a pottery vessel, ground, and made into an infusion sweetened with coarse sugar.

Kitchen utensils include pottery ollas and vessels, and a footless elliptical stone metate with a central concavity, which lies directly on the floor or is supported on sticks driven in the soil. Meat is kept smoked over the fireplace, and other food is stored on shelves of cane woven into the roof sticks or in hanging hemp bags or gourds. Each gourd has a broad half-gourd suspended above it, open side down, so that a rat descending from above slides off the gourd onto the floor.

The first daily meal is taken at daybreak and consists of "mute." There is no noonday meal, but the evening repast resembles breakfast. Between meals, the Indians chew coca two or three times to sustain their strength and allay hunger. For refreshment and stimulation, they drink guarapo, carrying it to work in gourds.

They cultivate pepper (ají) for a condiment, but purchase salt in the weekly market. The latter is so scarce that instead of mixing it with food they pass a lump around, each person licking it. Before the Conquest, three salt deposits were exploited in this territory, the most important being that near the modern municipality of Belalcázar or Páez. Here the local chief had the salt water boiled down to obtain blocks of salt, which he traded with other tribes for diverse products, or with which he bought help in his wars against the neighboring *Pijao*. Sometimes he permitted other *Páez* to exploit the deposit. Near the present-day Indian center of Ricaurte on the Ullucos River is another salt works that was much used in ancient times, but today is abandoned. Another source of salt was at Huila, where, during the Conquest, the Indians ambushed the Spaniards who sought it, and killed their horses.

HOUSES AND VILLAGES

Each *Páez* and *Moguex* family has its own house, located on a point or flat place in the mountains some distance from its neighbors. The aboriginal house seems to have been rectangular, which still is the only form. It was so lightly constructed of cane and sticks with thatched roof that the Spanish soldiers during the foundation of San Vicente de Páez "carried some Indian houses to their barracks because they were small and suited to it" (Aguado, 1931, vol. 3, book 16, ch. 9). Some distance from the dwelling, they always built a small woman's house. Under Spanish influence, some houses were divided into rooms, and built more solidly of "bahareque" construction, i. e., walls consisting of two faces of sticks with mud and rocks between (pl. 185).

Some had wooden doors and windows, and were built with nails and wires, though most were still made with vegetable materials.

The modern *Moguex* house has two rooms. The main one, entered through a small door, serves as storeroom for goods to be sold, reception hall, dancing place, and a room in which to keep watch over the dead. The other is a pantry for provisions and drinks; here are kept kitchen utensils. In the center is the fireplace and around it dried cowhides or platform beds made of horizontal poles tied to stakes driven in the ground. One's neighbors aid him to build his house, transporting heavy timbers over light rollers and singing rhythmically as they heave together. If the owner of a new house is a man of means, he pays for a feast of benediction or consecration carried out with a Catholic priest, a godfather, and a godmother.

The *Páez* does all this and in addition puts some pieces of silver money under his house to assure his good fortune. In the main house he places the metate on stakes, and in a secondary house, the press for extracting wax from laurel, one or more troughs or hollowed trunks, and large jars for chicha and guarapo. From the roof frame hang bags, or "mochilas," of netted hemp for belongings. There is also a bamboo candlestick, the wooden feast drum, sometimes a tiple or small guitar, and, nailed to the wall, a spindle. Outside, the loom stands against the wall. Beyond it is the sugarcane mill, which is made of a section of tree trunk with a hole above a projection on which the cane is pressed by hand with a rod which crosses the hole. Some mills consist of two or three wooden cylinders rotated by animal power.

In each maize field is a small, temporary house and a high platform where a watchman frightens the parrots and parakeets with periodic cries and motions.

Each *Páez* group today has its communally built pueblo, with "bahareque" buildings grouped around a rectangular plaza: a church, with its arched portico and small tower in imitation of Colonial architecture, a house for the priest, a school, and two or three large houses for meetings and fiestas, where they dance, sing, and sleep during fiesta days. But ordinarily, the people remain at their distant houses and fields, and do not live at the pueblo, the only permanent inhabitants of which are a few Whites and Mestizos.

ENGINEERING WORKS

The Spaniards found bridges which they described as "weak and flexible bridges of bamboo" and "bridges of vines." A territory so broken and crossed with so many rivers and canyons naturally stimulated the *Páez* in the construction of bridges and the laying out of roads. Today they make four kinds of bridges: (1) A simple vine or cable stretched across the river; (2) a kind of wooden stairs placed obliquely across the rocks; (3) an arched bridge of bamboo floored with spaced sticks, equipped with a hand rail on each side, and supported with stones, bamboo braces, and vines (pl. 185, *bottom, right*); and (4) a covered bridge with thatched roof, built of heavy logs supported by sticks and stones and floored with boards—a marvel of calculated strength, which, like the third type, is made entirely of vegetable materials yet can support loaded animals. To build an arched bridge, two groups of Indians approach opposite sides of the river and each plants a long, strong pole sloping out over the stream. The chief of each group then climbs out his pole until his weight bends it down to meet that from the opposite side, whereupon, clinging with one hand, they lash the ends together with creepers. This constitutes the main element of the bridge which is then completed by the other Indians.

TRANSPORTATION

Some Indians now have horses and use them for traveling and for transporting large burdens, but, in general, transportation is by foot, objects being carried on the back or in netted sacks hung by a strap, especially when visiting markets. A woman carries not only a heavy load but her small child suspended on her back in a blue woolen blanket held with a broad woven band, or "chumbe." Peculiarly Andean is the custom that the man travels on horseback while the woman follows on foot with a large burden.

DRESS AND ORNAMENTS

The *Moguex* and *Páez* formerly wore only small cotton blankets (mantas), although most of them "went about naked even on the cold mountains" (Rodríguez, 1684, bk. 2, ch. 1). They painted their bodies with bixa, using, according to Del Castillo i Orozco, stamps to apply the color. The paint also protected them against the strong sunlight and insects. They went barefoot, as all the natives in Colombia. According to one chronicler, their hair was "shorn" (Robledo, *in* Jijón y Caamaño, 1936–38). They wore breast and nose ornaments of pure gold or a gold and copper alloy, and necklaces of small figures, beads, small stones, and snails.

Soon after the beginning of the Conquest, the Indians commenced to use wide, long shirts of a very crude weave and hats which were so closely woven that they would hold water. The latter, which the Spaniards called "tacillas de Páez" (Páez bowls), are still in use. The Spanish encomenderos required that the Indians working on their haciendas near Popayán be dressed. This was the origin of the characteristic garment worn today, which combines the old small blanket (manta) with European dress. *Moguex* men wear short linen pants, and a blue flannel sash which covers them to their knees.

They protect the upper part of the body with a black poncho tied at the belt, or a shirt with a poncho over it. Women wear two skirts, the under skirt being black and the outer one white or gray. Both are held at the waist by a sash woven with figures. They cover their busts with two blankets which are fastened at the shoulders with wood, copper, or silver pins. Both sexes carry pouches woven of hemp which, like these Indians, are called "guambías." Their straw hats are dish-shaped, with small brims hardly distinguishable from the shallow crowns. The hats, always too large for their heads, are held on by two cords, one passing under the chin and the other behind the neck, around the hair. The women also wear woolen shawls, silver earrings, rings, and heavy necklaces of glass, shells, and silver. For festivals they prefer hats with the brim divided into two parts, front and back. These are lined with dark-blue cloth, with red and yellow on the brim.

When working, the *Páez* wear short linen pants or long woolen ones and a large woolen poncho tied at the waist. When going to market, they wear an additional poncho and a woolen pouch for coca. When traveling on the páramos, they wear a knit hemp cloak covered with large, thin leaves of *Gynerium saccharoides*, which protects them from the rain. The women wear a narrow woven cotton band, passed between the legs and tied at the waist, one, two, or more black or gray woolen skirts gathered at the waist and held by a woven sash, and two small mantas, like those of the *Moguex*. In traveling, a shawl is worn for covering and to carry the child. They adorn themselves also with strings or necklaces of glass or other beads, or white chaquiras, and sometimes are added silver pendants of Colonial origin. During festivals the women wear brightly colored blouses of imported fabrics and the men linen shirts.

MANUFACTURES

Basketry.—The *Páez* and *Moguex* make a few twilled baskets of cane strips and two kinds of hats. The hats are woven with the coiled or sewed technique. The spiraled warp in one kind consists of a thin bundle of rush or straw, and in the other of a braid made with seven strands. The latter is more common. Both are made by men who prepare materials while resting at home or traveling on the road. Weaving also includes waterproof capes made by tying sheaves of leaves or straw to a net of hemp cord.

Cordage.—Rope making is practiced extensively. Hemp (fique) is the raw material, and is made into cords for fishing nets, bird trap nets, bags or pouches for carrying belongings and products, foundation nets for the leaf rain capes, and cordage for various other purposes. The sisal or hemp (fique) leaves are scraped over the sharp edge of a board to loosen the fibers, which are then washed, dried, and twisted

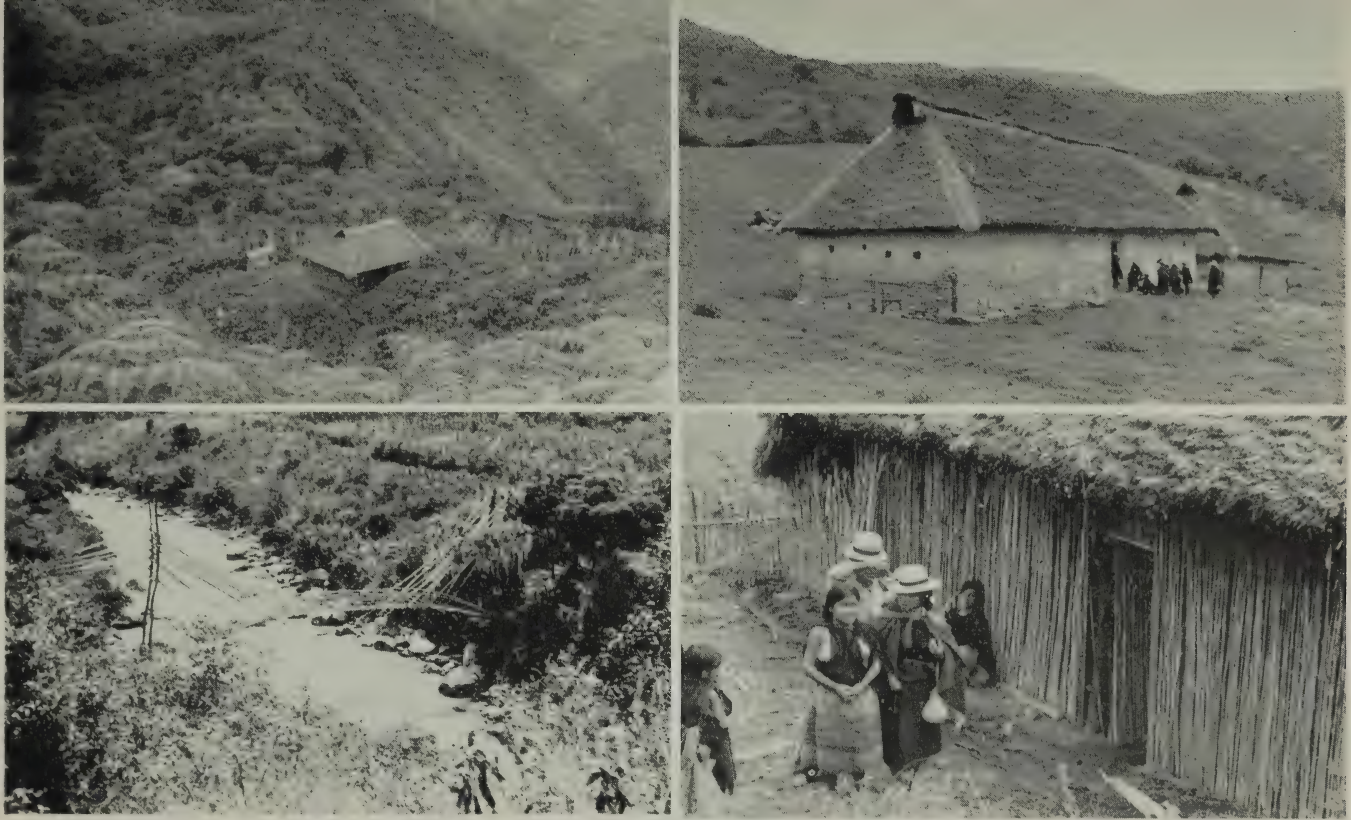
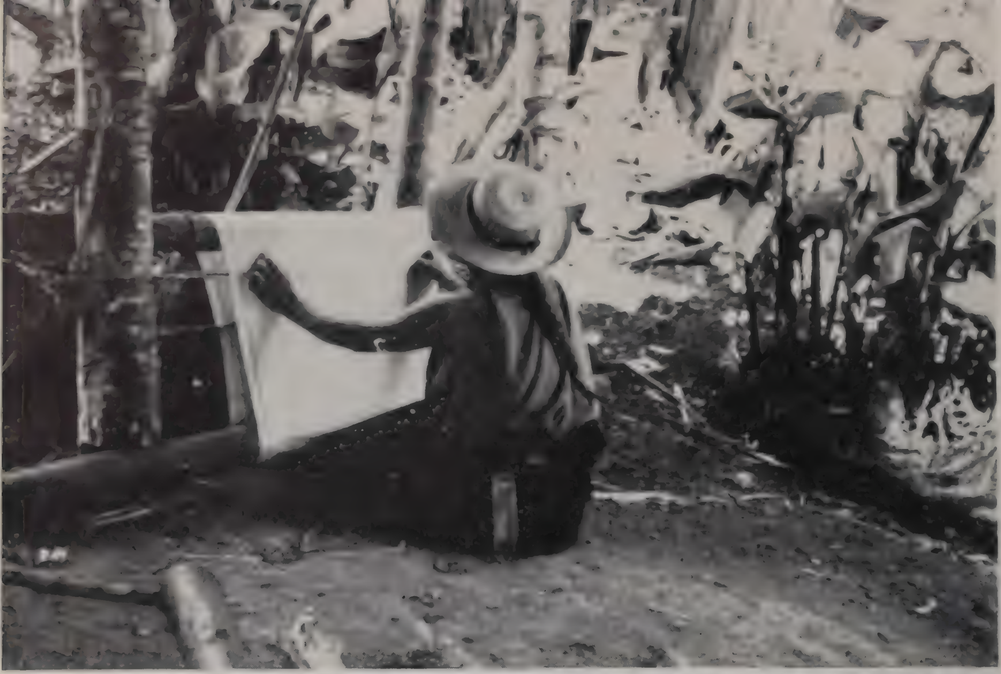


Plate 185.—**Páez houses and bridge.** *Top* (*left*): Family dwelling with menstrual hut at left. San Andrés. *Bottom* (*right*): *Páez* Indians and house, Calderas, Tierradentro. *Top* (*right*): Large communal fiesta house, Calderas, Tierradentro. *Bottom* (*left*): Suspension bridge, Tierradentro. (Courtesy Gregorio Hernández de Alba.)



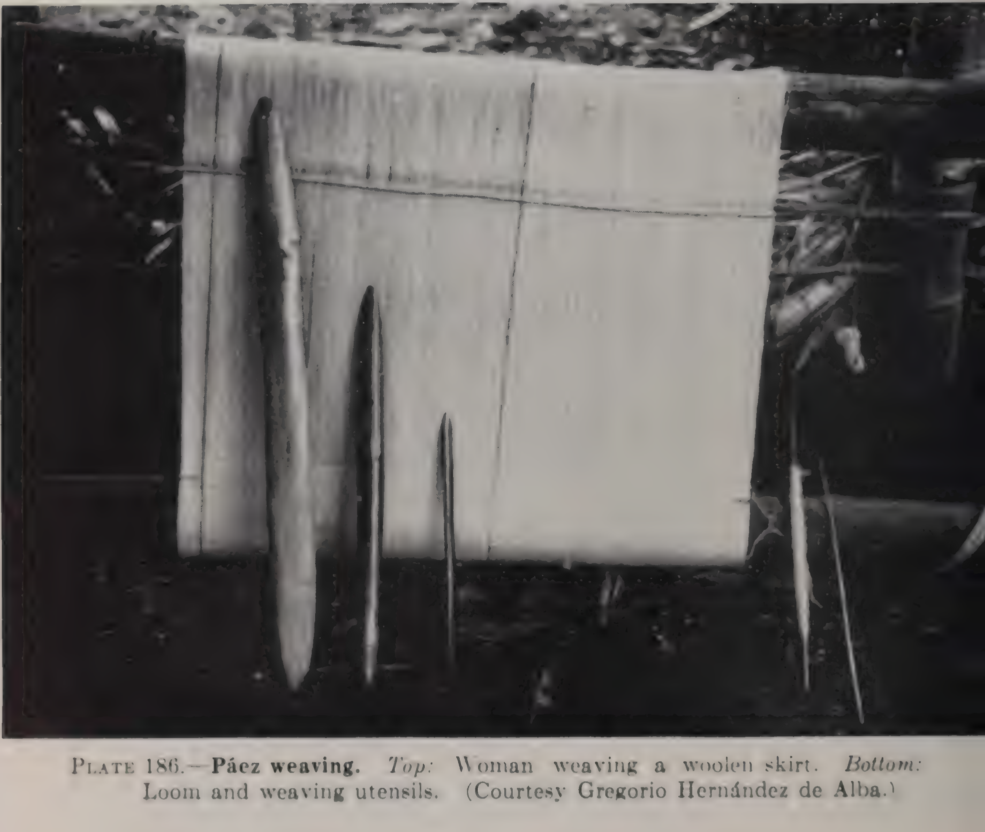
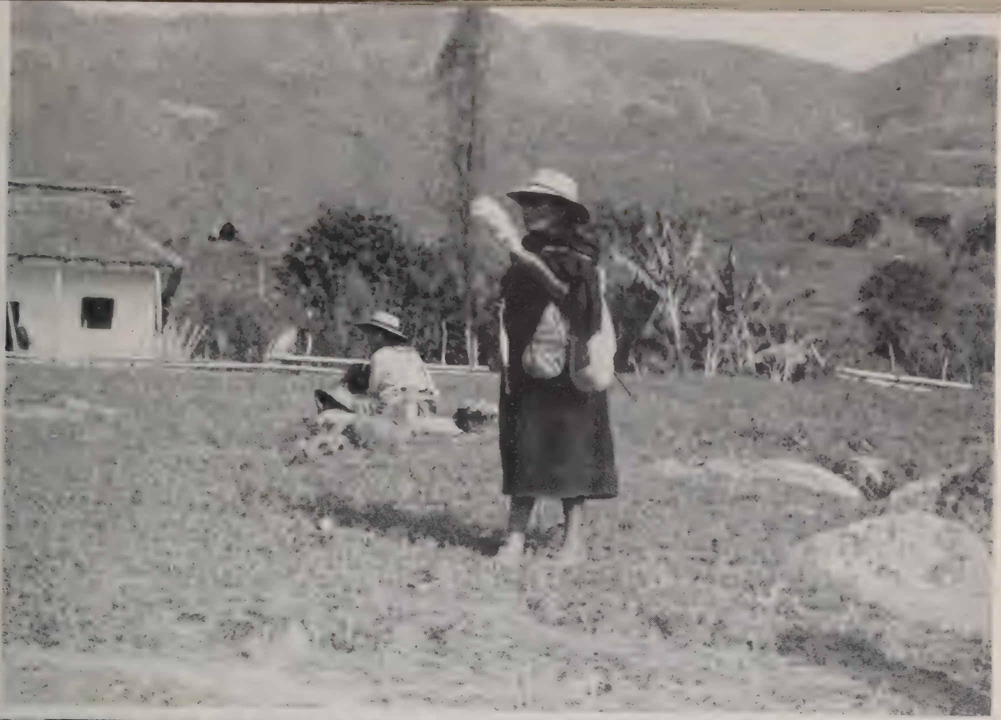


PLATE 186.—**Páez weaving.** *Top:* Woman weaving a woolen skirt. *Bottom:* Loom and weaving utensils. (Courtesy Gregorio Hernández de Alba.)



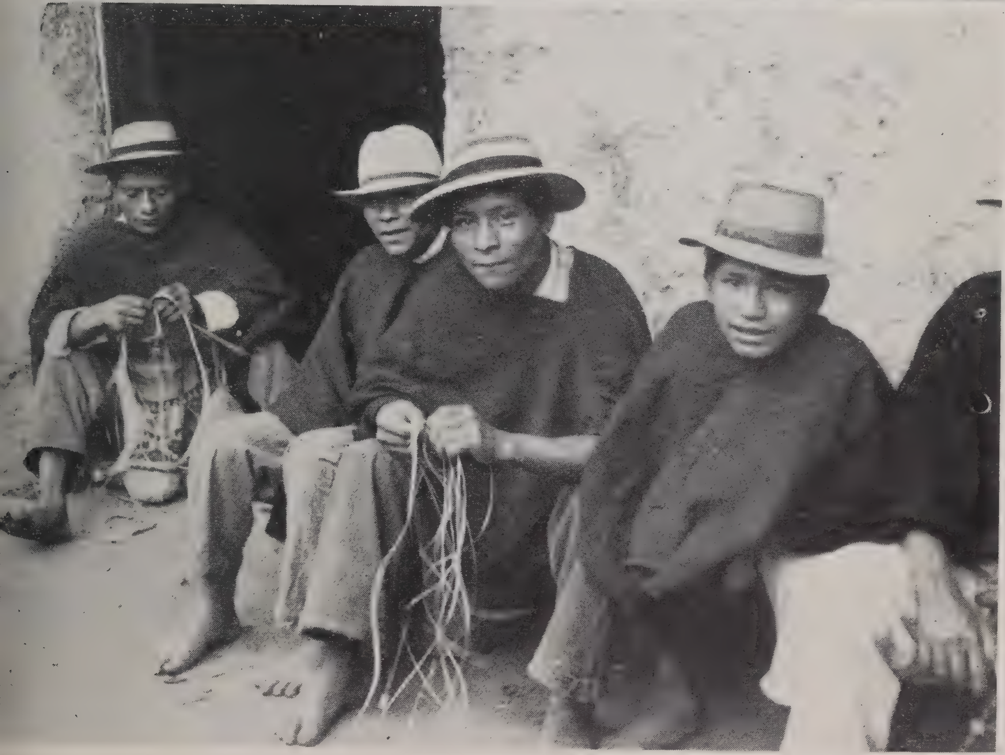


PLATE 187.—**Páez weaving and spinning.** *Top:* Woman spinning wool while walking, San Andrés, Tierradentro. *Bottom:* Men weaving straw hats. (Courtesy Gregorio Hernández de Alba.)

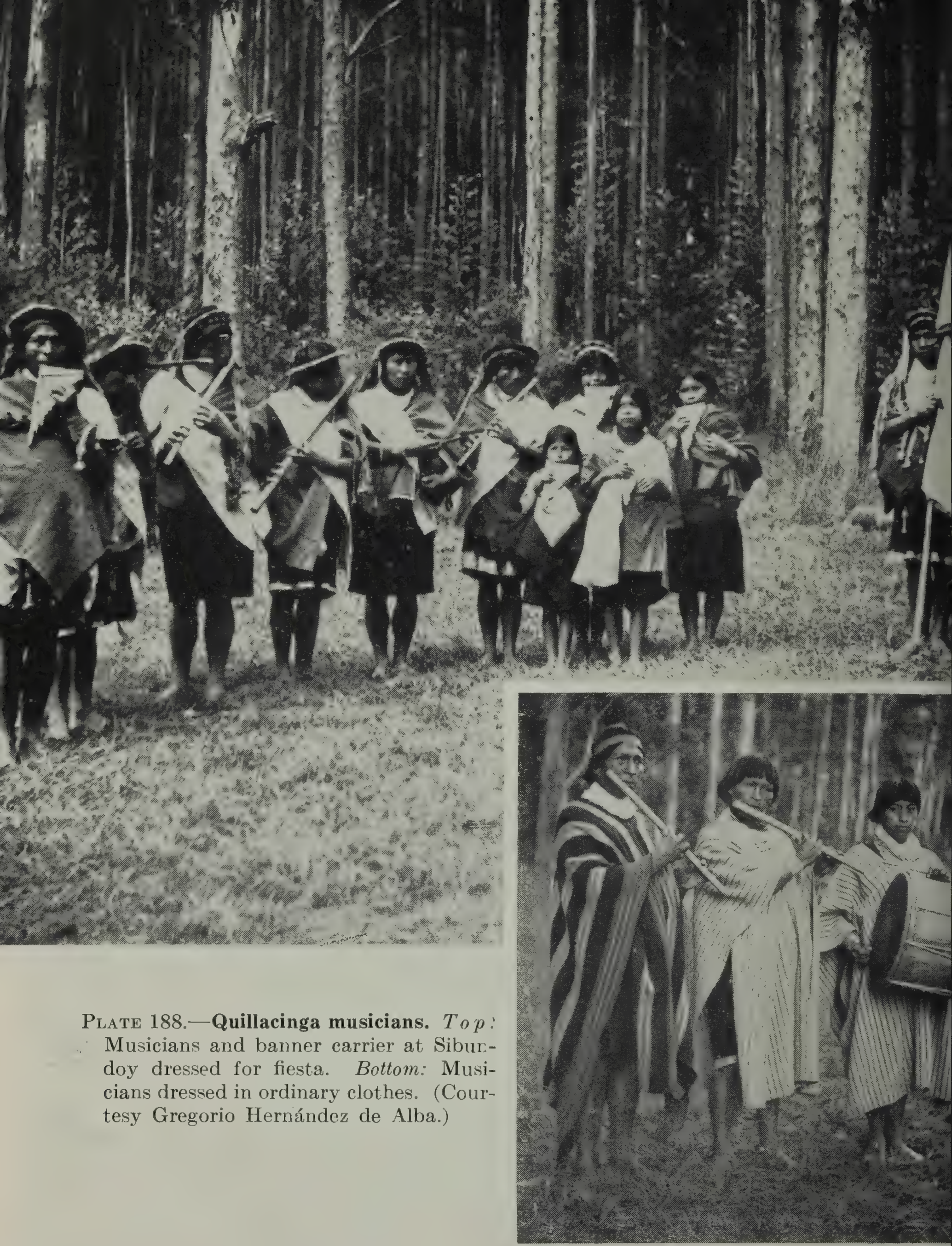


Plate 188.—**Quillacinga musicians.** *Top:* Musicians and banner carrier at Sibundoy dressed for fiesta. *Bottom:* Musicians dressed in ordinary clothes. (Courtesy Gregorio Hernández de Alba.)

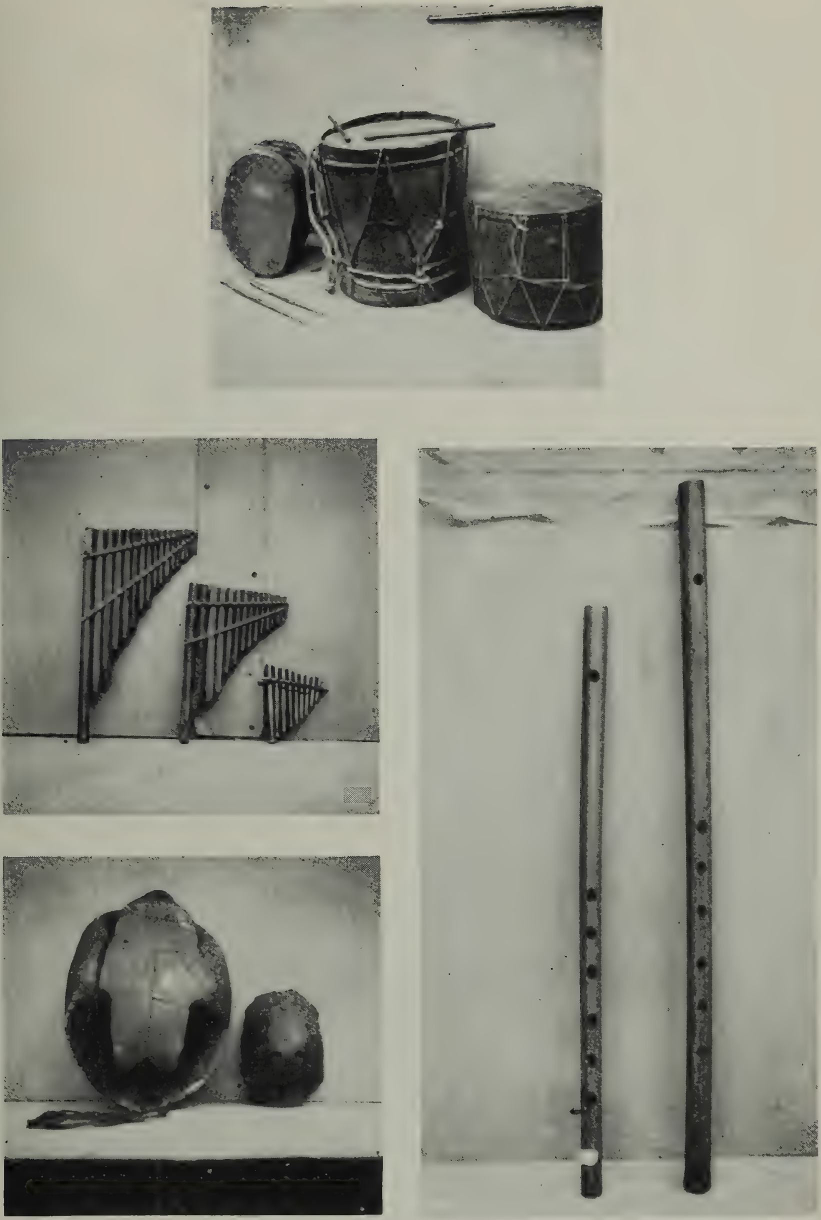


PLATE 189.—**Páez and Quillacinga musical instruments.** *Top: Páez* drums. *Center* (*left: Quillacinga* panpipes. *Bottom* (*left*): *Quillacinga* vibration instruments of turtle shell. *Bottom* (*right*): *Quillacinga* flutes. (Courtesy Gregorio Hernández de Alba.)

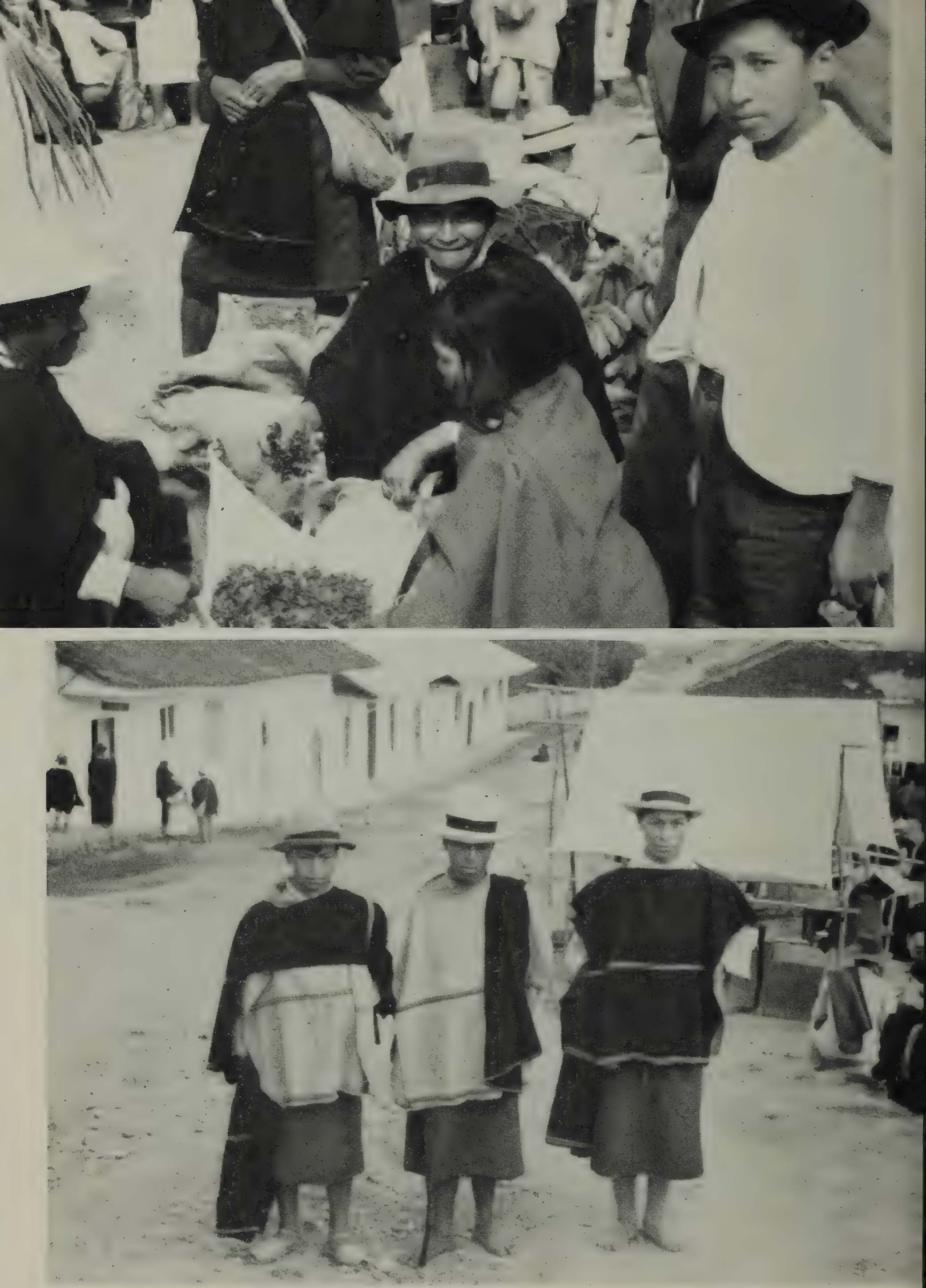


Plate 190.—**Páez and Moguex Indians at the markets of Inzá, Tierradentro.** *Top: Páez* Indians buying coca. *Bottom: Moguex* Indians. (Courtesy Gregorio Hernández de Alba.)

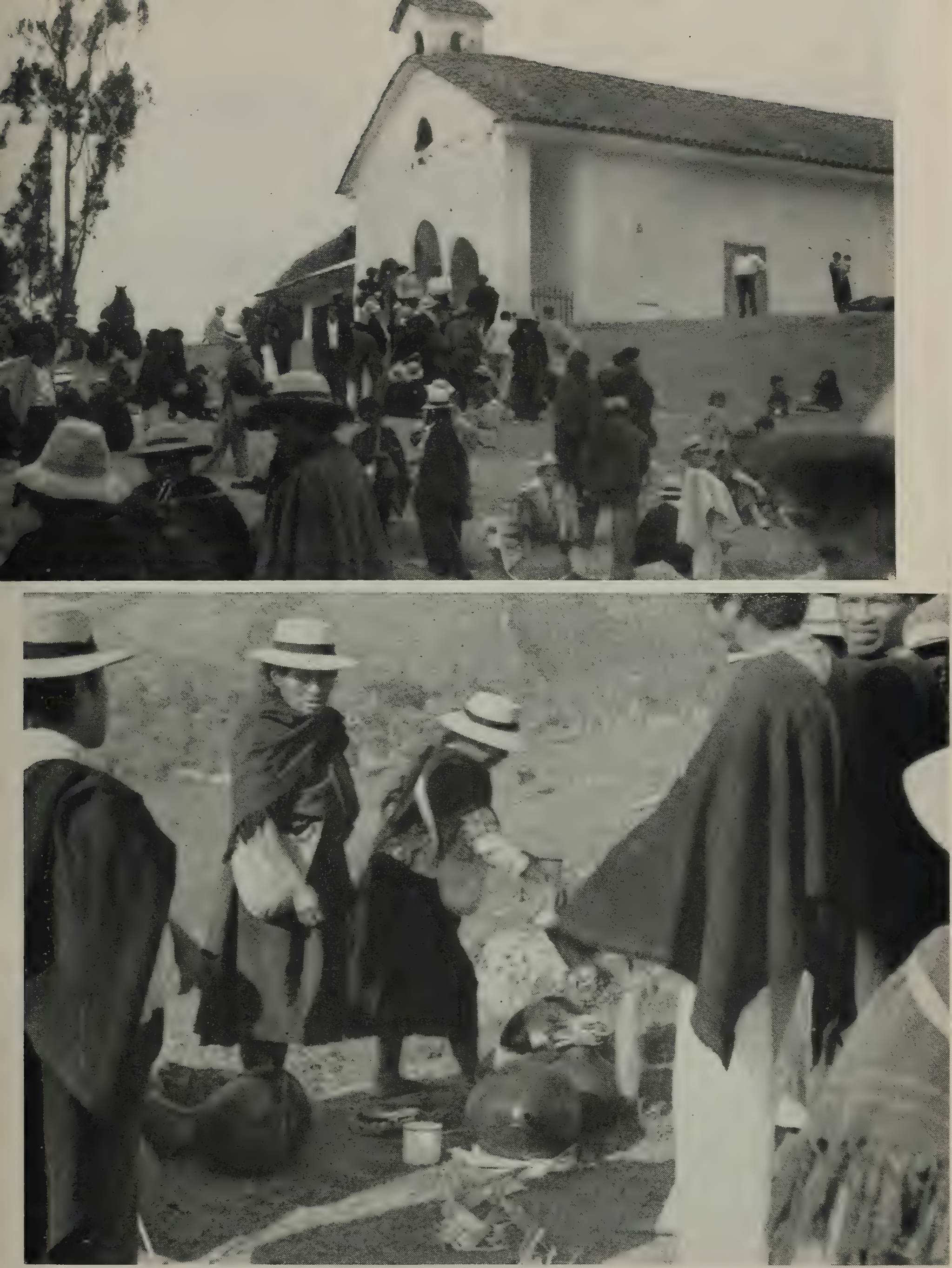


PLATE 191.—**Páez markets in Tierradentro.** *Top:* Market in Huila. *Bottom:* Selling chicha at San Andrés. (Courtesy Gregorio Hernández de Alba.)

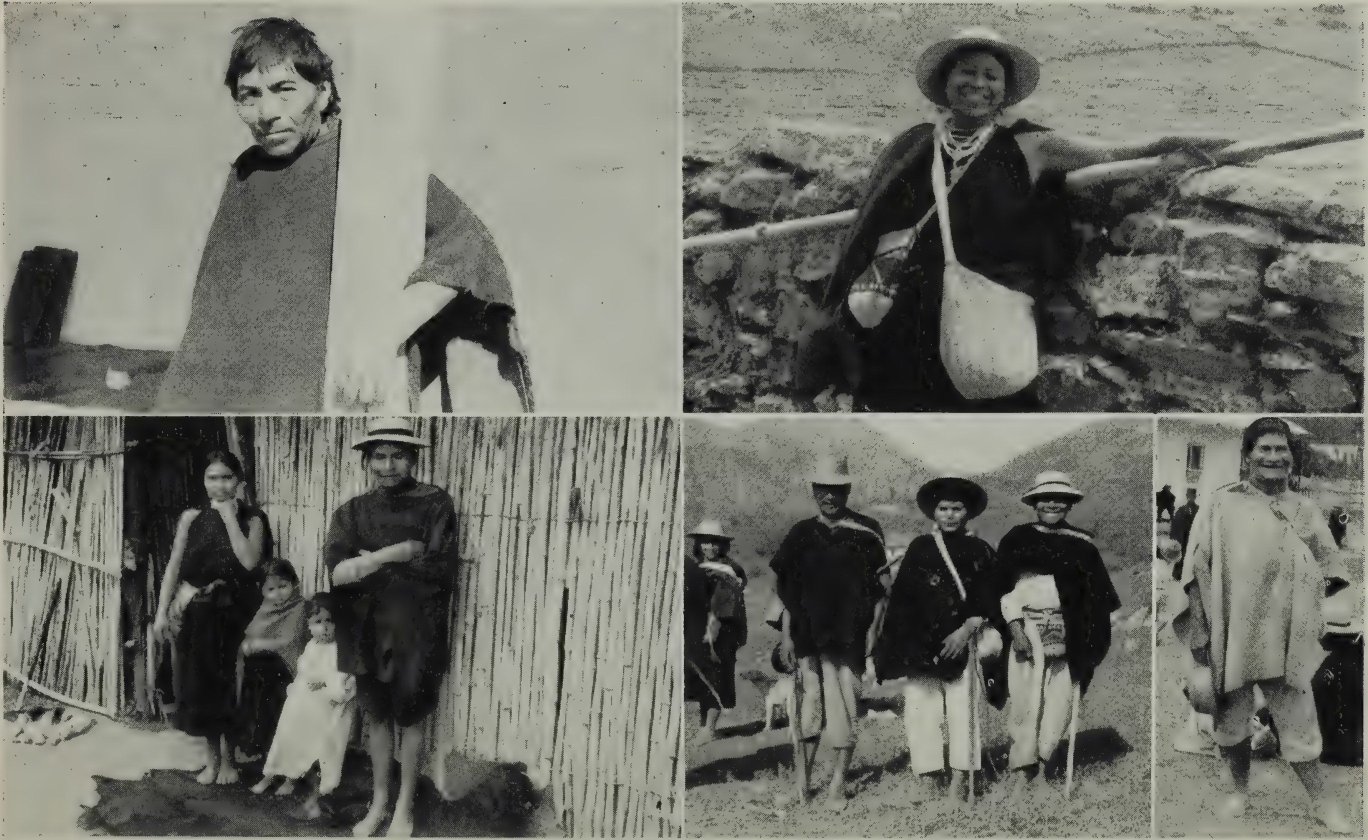


Plate 192.—**Páez types.** *Top* (*left*): *Páez* man, Tierradentro. *Top* (*right*): Woman with necklace and bags woven of wool and bast fibers, Calderas, Tierradentro. *Bottom* (*left*): Indians, Calderas, Tierradentro. *Bottom* (*center*): Indians, Calderas, Tierradentro. *Bottom* (*right*): Man at Inzá, Tierradentro. (Courtesy Gregorio Hernández de Alba.)

with the right hand over the naked thigh. Two strands are similarly twisted together until the desired thickness is obtained.

Gourds.—Gourds are still widely used. They are picked when ripe, cleaned out, and dried. With small openings, they serve as containers for beverages and powdered lime. Some are made into bowls and others are cut up to make spoons. Today these objects are undecorated, but formerly in Timaná they were painted with a resin varnish very similar to that used in Pasto. (See p. 930.) Before the Spanish domination, gourds were also used as frames over which were stretched the prepared skin of the heads of their enemies killed in war.

Metallurgy.—The metallurgy of these Indians was the same as that practiced throughout most of Colombia. The metals were gold, copper, and an alloy of the two (tumbaga). It is recorded that the Indians "worked gold," but the processes are not described. Specimens found recently in the territory, however, show molding, casting, and hammering. Metal objects included nose ornaments, parrot-shaped breastplates, necklaces with small animal figures, and some anthropomorphic idols. Gold occurs in this territory, particularly on the upper Páez or the Suin River.

Ceramics.—These tribes made and still make coiled pottery. Modern vessel forms include large jars for storing beverages and poorly shaped, crudely decorated containers for preparing and serving food. There is no individual specialization in this task, women making pots for their own family and not for trade.

Stone and wooden artifacts.—The native Indians made stone axes of a simple design, but stonework disappeared during the time of colonization, when the Indians could obtain manufactured iron weapons and utensils such as machetes, axes, hoes, shovels, etc. The manufacture of wooden objects—weaving, cooking, and farming implements and weapons—was furthered by the use of metal tools, and now is well developed, as exemplified by the trapiche (cane mill), a true machine made of wood.

Weaving.—Weaving, little practiced before the Conquest, developed with the post-Contact need for wearing more clothes and with the introduction of sheep, whose wool was used in addition to cotton. Weaving was and is exclusively the work of women (pl. 186). They prepare fine, uniform yarn with a common spindle, which they handle as they walk along the road (pl. 187, *top*). The loom is vertical, made of two horizontal rods fastened to two uprights. The warp runs vertically with a continuous thread. The horizontal weft is pressed down with a wooden sword. They also weave hemp bands on the loom. Woolen blankets are woven in natural colors, but some sashes have bright colors made of imported wool or of home-dyed wool. For red, they use one of the Rubiaceae (*Relbunium hypocarpium*), and for blue, the fruit of the jagua palm (kii), probably *Genipa* sp. A woven fabric is made black by burying it for several days with clay and branches of a *Phyllanthus* which they call "sal."

They make woolen bags by hand, using a kind of crochet technique without needles, and decorate them with rectangular and rhomboid figures. Some bags are made of hemp (fique), in which case the stitches are larger and the article has greater elasticity.

Weapons.—For weapons, the *Páez* used large, thick lances of black or chonta palm, 20 to 25 palms or more long, clubs or macanas, stones thrown with slings, large rocks rolled down from heights, spear throwers like those used by the *Chibcha*, and shields of jaguar, puma, or bear skin. The *Páez* quickly adopted iron arms from the Spaniards, and in the last wars of the Conquest they used steel swords and knives. In a recently discovered grave were copper bells, a golden breastplate, shield bars of tumbaga, a Spanish dagger, and a curved knife of the Arabian or north African type used by the conquistadors.

Today the *Páez* use the club or macana, ordinary guns, machetes, knives, and, for killing birds, the blowgun.

Fire making.—Fires are generally made today with flint and steel, but some Indians use modern matches. For both heating and cooking, the fire is made on the ground in the main house, surrounded by stones which help support the pots. It is covered at night, and almost never goes out.

Illumination is provided not only by the fire but by candles made of wax from the wax palm and from seeds of a wild laurel. The latter are cooked and pressed in a bag so that the wax drips into a half calabash or pot to form a semispherical lump. It is melted to make candles with cotton wicks. The *Páez* use these themselves and also sell them, for they are superior to candles made of animal tallow. A cruder means of lighting consists of transfixing a large number of "higuerilla" seeds on a long, thin bamboo splinter. When the splinter is laid horizontally and lighted, the first seed burns strongly, after which the flame passes from seed to seed, lasting some 15 minutes and throwing a fair light a few feet around.

COMMERCE

Each week a market is held in the municipio or in some of the small native villages (pls. 190, 191). The Indians sell vegetables, tortillas, eggs, chickens, and laurel wax, and buy salt, brown sugar, and especially lime (mambe) to be chewed with coca. Each product has a price in Colombian money, whether by quantity or weight. The unit of weight is called an "egg," and more or less equals the weight of a chicken egg. After his few customary transactions, paid for either in cash or in terms, in which the future coffee crop is mortgaged to the civilized tradesman, the Indian turns to drinking guarapo or chicha and becomes drunk. Often a heated discussion, always spoken in Spanish and not in *Páez*, leads to insults and perhaps to blows and injuries. A man's wife usually maneuvers him from the village and, if he falls asleep on the road, she sits by him warding off dangers.

SOCIAL AND POLITICAL ORGANIZATION

Political structure.—The *Moguex*, *Páez*, *Guanaca*, *Timaná*, and *Yalcón*, despite their great similarity in language and culture, formed separate groups at the time of the Conquest. Each was divided into several communities (parcialidades), of which those of the *Páez* were the most numerous. The *Guanaca* were split between two principal caciques, one of whom, Anabeima, joined the Spaniards against the *Páez* of Avirama. The other cacique was Esmisa, Anabeima's brother-in-law. Each *Páez* community had its own chief, but the communities were grouped into three great divisions. One consisted of the *Páez*, *Tálaga*, *Simurga*, and *Taravira*, on the shores of the Páez River. The chiefs of three of these groups were brothers; that of the fourth was their sister, whose name was Taravira. Another group was headed by Suin, and his son, Esmisa. In the third group, Avirama was joined by other neighboring chiefs of less importance.

Each community (cacicado) consisted of several polygynous families under a male chief (pl. 185, *top*, *left*). Each family had its own house, located some distance from its neighbor's. All the members of a community gathered for general work, and all or several of the communities united for war, either against the *Pijao*, their feared neighbors, or against the Spaniards.

The place of a cacique's residence was a sort of focal point and meeting place, and today most of such places are Indian villages with the same names, such as Suin, Tálaga, Avirama, Togoima (formerly Toboima), etc. The present *Páez* Indian reservation of Tierradentro is divided politically into two municipios—Páez or Belalcázar and Inzá—with 22 communities, each governed by its own councils (cabildos, of Colonial origin) and by the municipal authorities. The cabildo is elected annually. The Indians, however, are jealous defenders of their traditions, and insist on a captain and síndico, each with life tenure, to act as their own leaders and as true representatives of the cacique. Their duties are moral and fiscal and carry a certain divine authority, as they are inaugurated in the local church. The cabildo, on the other hand, has only administrative and police powers; it divides the land, orders work to be done, and executes the municipal orders. The members of a cabildo hold office for 1 year and receive no remuneration. They are elected on the first of December by all the male adults, or "macaneros," that is, the Indians who participate in the communal work according to a list presented by a council composed of former governors, the captain, and the síndico. The meeting may object to the list, but generally accepts it. On the following January 1, the cabildo-elect must appear at the office of the municipal mayor to receive the staffs, their insignia of office, and to assume their duties and responsibilities. The offices are: Governor and alternate, commissioner, two mayors (alcaldes), two constables (alguaciles), and three prosecutors (fiscales), one of whom is a young man assigned to learn the ways of government. The mayors, constables, and prosecutors are something like bosses or policemen, and execute orders issued by the Governor or by the captain or the municipal authorities to a community through the Governor.

Property.—The Indians today do not own any real property in the usual sense. The land assigned to an entire community is allotted to each adult for his use when he becomes a macanero, that is, capable of giving one day's work each year for the collective planting for the benefit of the saint and as many days as may be required by the cabildo for the repair of roads, bridges, etc., or for work in the village. The right to the use of the land may pass to the heirs, wife and children, in the absence of which it reverts to the community or the cabildo.

The house was formerly typical personal or movable property, which could be easily abandoned, dismantled, or destroyed. The same holds today for fragile cane dwellings. There are few houses so solidly built that they constitute real or immovable property. Other personal property, such as utensils, clothes, weapons, adornments, and jewels, was formerly buried with the owner. These things and livestock, planted fields, and crops are now inherited by the members of the deceased's family. In general, Colombian law is being implanted by the judges and municipal mayors, although the cabildo judges some minor offenses and punishes the offenders by whipping, imprisonment, or stocks (cepo), a form of torment retained from Colonial times.

Although the Indians' communities have in most cases titles of limits of their lands dating from Colonial times, there are still litigations on boundaries. An interesting case is the struggle of the Indians to dislodge a settlement of Negroes from the old salt works in Ambostá, where they were abandoned many years ago by a rich Popayán family who took them there to work the mines. The female Indian chief (cacica) of this territory allowed the Negroes to live on a hill, called "the hill of the fifteen Negroes." The Negroes are not organized under a cabildo, but have a chief who represents them. They all contribute to a special religious feast in the municipio, and provide means to continue the suit for the possession of the hill against the Indians.

The *Páez* family is completely under the authority of the father, whose wife and children obey him implicitly and may be punished by him. Nonetheless, the father must obtain his wife's permission to sell or exchange goods she produced, such as bags for coca, sashes, etc. Precise etiquette is maintained between fathers and godfathers (compadres). Whenever a man meets his father or his godfather, he must kneel to receive his blessing. The fathers and godfathers must embrace whenever they meet. In one case a young man was the godfather of his father's new son by another wife, so that in meeting his father the young man had to kneel bareheaded, and then stand with his hat on and embrace his father as a godparent. The father did not call him "son" but "compadre."

LIFE CYCLE

Childbirth.—A very old custom among these peoples is that at childbirth the mother should retire to a special house or go to the mountains. If she was delivered in the home, she and the baby were bathed, and then the family left the hut and built a new one elsewhere.

Today both the *Moguex* and *Páez* have a special hut for childbirth. The day after the child is born, the mother is placed in a hole up to her head and bathed with an infusion of leaves of "moquita," after which she washes the clothes and objects worn during delivery. Sh then returns to work and lives again at home. In the special hut, a *Páez* woman is assisted in childbirth by another woman, or, as a last resort, by her husband, who must bathe immediately afterward. Two days later, the mother circumcises her son or destroys the virginity of her daughter. Four or five days after the birth and after the first bath, the father takes the child to the sacristan of the community for baptism with water, and then returns it to the mother. The afterbirth must be buried or burned at the place of the birth. About 15 days later, the mother takes a bath and washes her child and her clothes and objects, and returns home. Later, the child is baptized with oil in the church by the priest with the godparents present. This is an occasion for general dancing and drunkenness.

Puberty.—At puberty a girl was formerly taken by her parents to a hill, placed in a hole, and bathed. Each Indian then took her a gift. Pittier de Fábrega (1907) notes that at a later period a girl's puberty was celebrated with the "Itsa-kó" dance, the girl, bathed with chicha, remaining in the hole. Today, a woman must retire during her menstrual periods to a special hut, where other women bring her food and build a fire to warm her. Afterward, she bathes, washes her clothes and objects, and then returns home.

Men, until recently, underwent a sort of initiation, in which they were taken to the shores of the sacred lagoon of Juan Tama or to the heights of Cuetando, where they built a hut and planted a miniature field as proof of their masculine aptitude.

Education.—Today the Indians are educated principally by their parents in the customs and tasks pertaining to each sex. Some boys and a few girls are sent to the few missionary schools, where they are given religious instruction and are taught Spanish, arithmetic, geography, the history of Colombia, and modern embroidery or light basketwork. The *Páez* are reluctant to send their daughters to the schools because they feel that women should keep the traditions of their people. The missionary schools strive to change the native language and the cultural traditions which have given the Indian community social cohesion.

Marriage.[11]—Formerly polygyny was prevalent, but now Catholicism has imposed monogamy. The Indians continue, however, to practice trial marriage (amaño). A marriage is arranged as follows:

> The bride is selected by the young man's parents or by himself. His parents and two witnesses or godparents then visit her house to request her for the groom. They also serve as advisors to the young woman, in case she disapproves the marriage. The visitors carry half-filled bottles of rum (aguardiente) and some special garments for the girl. The young man's father offers the girl's father a half-bottle, acceptance of which means, as usual among the *Páez*, that the second party is well disposed toward the proposal and the negotiations may proceed. If the girl's mother agrees, the boy's mother presents her a half-bottle of liquor. The godfather or witness gives another half-bottle to the girl's father and the godmother gives one to the mother. The visitors now leave, taking the girl, who then begins a year of trial marriage, during which the young man seeks proof that the girl is able to bear children, is active, cooks well, can weave, and can cultivate the land. After the trial period, the man may return the girl to her parents or they marry in the Catholic Church, holding a feast which, like all such celebrations, is called a "cuido." The couple and their parents and godparents are accompanied by an orchestra (chirimía) to the house where the feast is to be held. Here the bride puts on a modern dress, a ribbon on her hair, necklaces, and earrings, while the groom is with his godfather. As the guests arrive, chicha is distributed frequently, music is played, and then there is a feast of thick soup, generally with chicken, cooked yuca, arracacha, and roast or baked meat. In the afternoon, after more music and chicha drinking, the "refresco," really a banquet or social communion, is served. Six bottles of wine made from cane molasses, cinnamon, and cloves, and cake are given to the bride, groom, godmother, and godfather, who give some to everyone present. A prayer, led by the head of the house, then asks the souls of the dead to bless the marriage and give permission to dance. First, the godfather dances with the bride, then the godmother with the groom, after which everyone dances. The feast lasts 5 days, depending on the wealth of the family. Chicha is served and accepted with the phrase, "May God pay you, compadrito, for accompanying us. Accompany us more."

Death.—At a death, the family formerly buried the deceased inside the house with his possessions, and abandoned it. Some communities, however, preferred to cremate the body or dry it over the fire. The graves were "large and deep," and chiefs were buried with some of their wives and with food and chicha (Cieza, 1932, ch. 32).

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[11] I thank my wife and companion, Helena Ospina de Hernández, for her research in 1936 on matrimonial matters.

In Colonial times, according to Del Castillo, the *Páez* removed a dying person from his hut but burned the house if anyone died in it. They had given up cremation, however, and buried in the earth, building a fence around the grave. Today, they cover the corpse with a white shroud and place it in the middle of the house with candles and flowers. Here it is watched over one night by relatives and friends, and then buried in a cemetery, where each relative tosses some earth into the grave saying, "Go with God." The mourners then bathe in the river without disrobing, and in the evening hold a banquet with chicha, sancocho (vegetable stew), meat, and tortillas. For 9 days a cross, a container of water, and a candle must be kept on the deceased's bed, the water being kept there so that the soul may drink. The relatives pray every night. A month after the death, a shaman purifies the house. The relatives and friends kill a pig, cut it lengthwise in two halves, one for the shaman, the other for the ceremonial banquet. The shaman sweeps the house floor with the pig's legs and some special branches, which are later buried. He chews coca, says some unintelligible words, and spits leaves on the house walls. The residents and guests then enter the house for the final proof of purification. The shaman, standing in the center of the house, gives a dog half a tortilla. If the dog does not die, he divides the other half among those present. He does the same with a piece of cooked meat, and if the dog still does not die, he blows chicha in all directions in the hut, and then divides what remains with those present. The hut and food are then declared clean The food is then eaten and much chicha drunk.

The modern burial customs of the *Moguex* differ somewhat from those of the *Páez.* The former dance for 9 days before and after burying a dead child. Because of the special ceremonies for adults, young Indians gather and prepare wood to be burned at their own funerals. When an adult dies, relatives and friends bring wood, food, and money to the house, and work for his family, who pray and weep for 3 days over the body. On the fourth day, they carry the body in a procession to the cemetery. Upon passing a house or inn where the deceased was accustomed to take chicha, they stop and drink. The burial procedure is like that of the *Páez.* Back at the house, they purify the objects used by the deceased over the fire, and leave his clothes and the hide he used as a bed at the river 9 days, after which they may be used. Meanwhile, the guests remain with the deceased's family, helping them. On the 9th day, they extinguish all lights and go to the nearest hill to mourn, while a shaman remains in the house to catch the soul of the deceased. He chews coca, spits it in all directions, and beats around with sticks to make the soul come out. Then he lights the fire and turns on the lights, and everyone returns to examine a layer of fine ashes placed beforehand at the door. If the ashes shows the footprints of an angel, they believe that the soul is saved, but if the footprints are those of a bird, they believe that the soul is condemned to hell. In some cases they ascertain the fate of the soul by the kind of bird prints.

WARFARE

The *Páez* and *Moguex* were particularly warlike. Their attacks were staged in the morning, accompanied by yells and the sound of trumpets, horns, sea shells, and drums. They were generally armed with great spears or pikes, spear throwers, and slings. When fighting, they would first hurl javelins with their spear throwers, then use their slings, the missiles for which they carried in a pouch, and finally pick up their spears or pikes for man-to-man struggle. They also formed closed squadrons, men with clubs alternating with spearmen. The former would step forward to wield their clubs, and then draw back to their positions for protection. Their best defense was on high ridges, from which they rolled large stones on their enemies. They perfected these natural defenses by cutting or camouflaging paths on which they prepared ambushes. They built trenches or pitfalls, which caused the attacking Spaniards much trouble.

The principal enemies of these peoples were the *Pijao* and the Spanish soldiers. The *Páez* remember the *Pijao* well, and call the stone statues in their territory "portraits of Pijaos," and the painted tombs, "houses of Pijaos." They are afraid to see the statues or visit the tombs.

To insult an enemy killed in war, they cut off his penis and placed it on the road.

Some historians ascribe cannibalism to the *Páez* and the *Moguex*, which seems to have no basis in fact. They kept trophy heads and stuffed the skins of their enemies, but did not eat their foe. There are, however, numerous historical references which state that in the wars against the Spaniards, the *Páez* left the bodies of dead enemies for the *Pijao* to eat, and that they cremated their own dead or dried them over a slow fire, which Friar Pedro Simón (1882–92, ch. 23) mistook for a means for preserving the flesh so that it could be eaten later.

As war trophies, they kept enemy heads, which they preserved with resins, and the skins of their entire bodies, which they filled with ashes (Aguado, 1931, vol. 3, book 16, ch. 3). They even preserved the heads of the Spaniards' horses. They carried these trophies to wars, meetings, and feasts.

ESTHETIC AND RECREATIONAL ACTIVITIES

Art.—Arts included sculpture, small, cast gold idols and figures, and painting. Their best known art objects are those decorated with lacquer or resin, found in the Timaná region, and the stylized representations of beings which women still weave on cotton sashes.

Music.—These tribes formerly played on trumpets, drums, large sea shells called "fotutos," cornets, and cane flutes. These instruments were played not only to accompany dances but also when going into battle. The sea shell trumpet was used during the Colonial Period but has been abandoned. The drums are made of hollowed trunks, and the drumheads of animal skins The flutes are made of cane, and vary in length and thickness. They are capable of such variation in tonality that the musical combination is pleasant to the ear.

A kind of orchestra, known as a "chirimía," today consists of a large drum to beat time, a small drum to play a rhythmic roll, and flutes to carry the tune. Each community has its orchestra, but every Indian is a flute player and loves to play his instrument when traveling over the hills. The music is nearly always sad and has absorbed some of the regional Colombian popular airs. It has few variations, and changes to a solemn tone on funerals. The *Páez* love their own music so much that, instead of using the Gregorian music of the Catholic rites, they have imposed their own music on the religious ceremonies. Thus, at Mass, they play the special music used when an animal is to be killed and eaten. Other music accompanies the bursting of skyrockets and firecrackers. There is music for the Elevation, for the Creed, and for the Requiem Mass. Certain musical pieces are called simply "bambuco" (local airs), though they have some variations.

Native songs narrated the triumphs and feats in war, but none have been collected, and all are now forgotten. Today the Indians sing only some modern Colombian airs or religious songs.

Dances.—Dances were very important to these Indians, being held for war, for religious ceremonies, for weddings, and for sexual initiation. During Colonial times, Del Castillo i Orozco reported the following dances, most of which, as their names show, apparently had not suffered any change under Spanish influence:

Gueyo coo, a dance to ask for money.
Vito coo, a dance of the rod or stick.
Xsita coo, a dance of sea shells or of the armadillo. It was accompanied by two sea shells of different tones.
Onza coo, a dance of rats.
Imegnuei coo, a dance of the sparrow hawk.
Ech covi coo, a dance of the phantom's flutes.
Bel covi coo, a dance for great festivities.
Quimb coo, a dance of the drum.
Itsa kó, added by Pittier de Fábrega, a dance of girls' puberty.

There is much dancing today. The sexes perform in couples or separately. Among the *Moguex*, some of the expert dancers are paid to dance with all couples in a sort of "bambuco." Dancing is always a part of *Páez* ceremonies for the death of children, baptismals, weddings, saint holidays, and meetings for collective work (mingas) held in the evening when people return from their plantations.

Dancing, as other social events, is subject to a special ceremony or etiquette, strongly connected with religious beliefs. For example, in the wedding celebration, a prayer is first said in which the souls of the dead are asked permission to dance, or "scrape the floor," as they call dancing. Only the godparents and the bride and groom may dance at the beginning.

The *Páez* do not masquerade, but the *Moguex* always masquerade during the period of carnival preceding Holy Week.

Games.—Games do not hold an important place among these peoples. The children amuse themselves by imitating the activities of their elders. The only game recorded is simulated warfare, performed as a part of a rite in honor of the dead after a communal feast. Two teams under their captains or caciques attacked and shot arrows at each other. Even if some contestants were killed or wounded, no one bore a grudge.

Narcotics.—The *Páez* and the *Moguex* chewed coca leaves mixed in the mouth with lime powder. Coca chewing is widespread among men, but very little practiced by women. It is used especially by the shaman when he is practicing. In Colonial times the use of coca spread to the rural population of Mestizos and Whites in Nariño, Cauca, and Huila.

Alcoholic beverages.—These Indians formerly made chicha of maize, but today they ferment it with sugarcane molasses. They also have fermented sugarcane juice (guarapo), and a sort of rum (aguardiente). The latter is distilled clandestinely in their huts from guarapo and certain herbs fermented together in earthenware crocks. The Indians drink guarapo every day, but restrict the use of chicha and the stronger guarapo and aguardiente to market days, religious feast days, burials, weddings, mingas or meetings for work, and witchcraft ceremonies. Guarapo and chicha are made by women, who sometimes chew the maize to increase its fermentation. They are stored in large, hollowed tree trunks and in large earthen jars, which are kept in a special place in the hut. There is never a lack of these beverages for home use and for welcoming an unexpected visitor.

RELIGION

The early Spaniards had little understanding of the religion of these people. They reported that the Indians had but few idols and no temples or places of worship. Castillo mentions that they worshiped the sun, in whose honor they met and danced in places called "Itaqui-finó," i. e., the place where the sun revealed its mysteries; and that they venerated a kind of culture hero called Guequiau. It was he who instructed shamans (mohanes).

This hero has a counterpart in the religious legend of Juan Tama, the Son of the Star. One day when the Morning Star shone very brightly, some Indians found a child in a gorge—ever since called the Gorge of the Star. This was Juan Tama. They picked him up and entrusted him to a woman to nurse, but he nursed so much that her milk dried up. He was given to another woman, whom he also made very weak. They then said that he could not be nursed by a woman, and gave him food. After he grew up, he married the female chief of Huila, Doña María Mendiguagua, and became chief of all the Indians. He instructed people and explained to them how to keep the land for themselves and not mix with White people. He pronounced them invincible and summoned a chief from Pitayó, called Calambás, whom he appointed his manager. Calambás rebelled,[12] but was defeated by Juan Tama, who pardoned him on account of his bravery, and conferred on him and his heirs the right to rule the *Páez* in Bitoncó. As death approached, Juan Tama went to the lake on the páramo of Moras and sank into the waters. He had come out of this place and returned to it, leaving no heirs.[13]

In the neighborhood of Bitoncó there is a rock with what appears to be human footprints. When the Indians pass it, they uncover their heads and say, "The Holy One came this way." Another remnant of the cult of Juan Tama is the custom that each member of the council spends one week at the shores of the lake before the end of his term to render an account to Juan Tama of his actions in office. Likewise, newly elected officers, as soon as they receive their staffs or insignia of authority, spend a week at the lake. They toss silver coins into it, wash their staffs, and pray for strength to rule well. This ceremony, performed with the greatest secrecy, is called the "curing of the staffs." Recently, however, the Indians have stopped "curing" their staffs in the lake, for they say that Juan Tama is angry, and whenever they approach the lake, it rains and storms badly.

In the Guanacas section there was another sacred lagoon, called Tumbachí, which was recently drained because a snake that lived there attracted girls and kept them for a whole year, and then returned them when they were about to become mothers.

These tribes believed that the soul comes back to life.

Witchcraft was strongly developed among these Indians, who still believe in most of its practices, in spite of the catechization forced upon them by the missionaries. The power to do evil is not limited to the witches, but is possessed by anyone who entertains a momentary feeling of envy, and to women, who may not walk over a stick or a cord stretched on the ground. Contact with women during their menstruation or during the days following childbirth causes the "mokokoy" to persecute the men and make them ill.

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[12] During the War of Independence, as well as in subsequent revolutions, the Indians of the family named Calambás distinguished themselves as warriors.

[13] We are indebted to Father David González for this legend, told to him by an old Indian in Lame.

Animals possess the power to prognosticate evil. A document written in 1730[14] tells that an Indian killed a rooster because he had crowed before daybreak, and said, "Rooster, you are forecasting my death, but I shall kill you first." They believe the same thing when certain birds sing. For example, the call of an owl at midnight brings death to someone. And certain small birds called "ulchik" and others called "bich" warn whomever hears their singing that he will meet with disaster. The box turtle follows people warning them that they are going to die.

Del Castillo says that the Indians will not strike white dogs, so that they will not be bitten by them when they enter the future life.

The belief in spirits (kl'iumb) is quite general. Among these spirits is the "pitsuala" which persecutes people, makes them ill, and even kills them. The rainbow, or "Etskituns," causes a rash to break out all over the body of anyone who ventures out while the rainbow shines, and the drizzle that generally accompanies the rainbow will harm a person who gets wet in it if he does not bathe immediately. When the rainbow appears, they stay indoors, and blow or spit tobacco in its direction.

They believe that the lagoon on the snowcapped peak, Huila, is charmed, and that if they try to go near it wind and hail storms rise. Supernatural evil forces are supposed to be present during many social activities, such as dancing, meetings, funerals, house building, and bridge construction. When a bridge is built, two Indians beat the water constantly to drive away evil spirits. When traveling on the mountains they place small stones or coins on top of some large natural rock to assure a successful trip and to avoid angering the spirit of the mountain.

Sometimes these spiritual forces assume a bodily form, as in the case of the fireflies, which bring diseases or which may be wrapped in Santa María leaves and placed in the path of an intended victim. Most feared are the ghosts of the dead, which consequently are the most propitiated. The *Moguex* and the *Páez* ask their permission to dance, and honor them in a special rite, which blends old beliefs with new religious concepts. Thus, offerings are made to the souls during the first days of November, or whenever the curate is able to visit the Indian village. Each person offers some products from his farm, including vegetables, cornbread, eggs, and chicha, which he piles on the church floor, together with wax candles—one if the person does not have anyone in particular to remember, two for each deceased relative. When Mass begins, they throw flowers on the presbytery, as an offering to the souls of children. Afterward, they go to the cemetery in procession, and the souls of the departed come down to the empty church to take the food. Later, the people sell whatever the souls left or failed to eat. Everyone buys something, the captain's assistant collecting the money, while the constables of the council, raising their whips and shouting insults, prevent frauds in the general disorder. The money from the sale is given to the priest to pay him for the work in the rites. As each person leaves the church, he kisses a crucifix held by the sacristan at the church door. They kiss it once for each dead person whom they wish to remember and pay a cent each time. In addition to offering food at the church, the *Moguex* cover their tables at home with food, which is also intended for the souls of their dead, and at the end of 2 or 3 days they eat the food, saying that they are eating what the souls have left.

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[14] Statement made by Javier de Orozco y Cuellar in a lawsuit by the Indians of Toboima for the possession of land. From the ecclesiastical files of Belalcázar, or Páez.

Christmas and Holy Week are both great occasions for the Indians, who celebrate them with music and some of their ancient rites. Even though a priest may not be present, they conduct the rites in a manner that dates from Colonial days, when a *Páez* Indian named Undachí tried to combine Catholicism with their own religion. The man claimed to be able to see God, who used to come among the Indians and talk to him in his own *Páez* language. The new religion included a chapel, Mass, and candle and flower offerings.

Sickness.—Sickness was always thought to be caused by witchcraft or by someone's will. The evil force entered the body and made it impure; it had to be expelled or "cleansed," lest death ensue. If a delirious person told who was killing him, the individual mentioned was thought guilty; or, if, after a death, the face of the deceased should appear to somebody, the person was considered responsible. These beliefs are still in force today, and the Indians avoid the causes of sickness, such as having sexual intercourse with a menstruating woman, exposing the body to bad weather while there is a rainbow, and neglecting to bathe after a burial or to purify a house where a death occurred.

To fight disease they still have shamans. *Moguex* shamans use tobacco, coca, plants known as yacuna and chundar, and rum in their practice. After remaining shut up in a dark room for a night, they either confess their inability to cure the sick person or proceed to administer the traditional medicines. Sickness is conceptualized as an animal, which enters the stomach, head, or other part of the body. In former times, the shaman fasted with the sick person, abstaining from salt and fats and taking only coca and chicha. Today, he requires that only the patient fast. He spits coca juice on various parts of the sick man's body, and at night performs a ritual to "take out the dirt," i. e., the cause of the disease. In the course of his treatment, the shaman goes out to a hill to gather fireflies. He places them in a vessel and buries them, as they are supposed to be the harmful evil spirits sent by the person who caused the sickness. They are thought to turn against the person who sent them, whom the shaman identifies by his shadow, which he detects in the darkness of the night.

THE CULTURE OF THE PIJAO

Despite 48 expeditions prior to 1611 against the *Pijao*, one of the most fearsome and savage people in Colombia, the Spaniards learned little about their culture. Friar Pedro Simón collected the most details regarding their usages and customs.

SUBSISTENCE ACTIVITIES

Pijao food was very similar to that of the peoples previously described. The most common cultivated plants were maize, yuca, arracacha, beans, potatoes, and other roots and tubers; and many fruits, such as avocados (cura), papayas, plums, pineapples, and uchuva (a kind of cherry). The Indians got many fish from the rivers, especially the Magdalena River, and on the mountains they hunted pumas and "ocumares," a sort of anteater. They cultivated vegetables, but not fruit trees, in fields which the Spaniards always sought to destroy and burn.

HABITATIONS

Dwellings were spacious and high. They had walls of wood and mud (bahareque), whitewashed with clay or white earth, and were provided with furnishings, such as wooden chairs. The conquerors found the chief, Carlacá or Calarcá, sitting in state in one of those chairs in his house. Some people lived temporarily under the shelter of trees and palms, perhaps only while farming.

DRESS AND ORNAMENTS

The *Pijao* generally went entirely naked, hence the name "Pinao" (men of large sex) given by the Spaniards, a word which soon became "Pijao." They painted their bodies with the substance obtained from the seeds of the arnotto tree, and some groups wore small cotton blankets (mantas). Men and women protected their heads and long hair with hats, not unlike bonnets, woven of palm leaves. They adorned their bodies with many feathers in a manner which the Spaniards described as "quaint and odd liveries made of feathers in various and pleasant colors," and wore some gold ornaments. They deformed the skull by tying two boards to the heads of newborn babies, one behind and the other in front, so as to produce an anterior-posterior deformation, as evidenced by the skulls recently excavated.

MANUFACTURES

The *Pijao* smelted gold and copper and alloyed the two. They were expert at cutting metals by abrasion, and were even able to cut the iron and steel of Spanish weapons. The process consisted of rubbing twisted cotton threads with sand and water across the object they wanted to cut. The results amazed the chroniclers.

They made several types of earthenware, among them a kind of large pitcher, which according to the conquerors was covered with a rattan net, probably for its protection or for convenience in carrying it.

Other manufactures included calabashes, used as containers for water and for personal effects. They made polished-stone artifacts and a few small woven cotton blankets.

The most important weapon was the spear, which measured 25 "palmos" and had a fire-hardened point.[15] They also used wooden clubs (macanas) and, for defense, sometimes rolled rocks downhill against their enemies.

SOCIAL AND POLITICAL ORGANIZATION

The sociopolitical unit seems to have been the small, exogamous local group (cacicado), which consisted of several polygynous families, each occupying its own house. Each cacicado had a chief, who enjoyed prominence and maintained a solemn demeanor. There was a distinct class of shamans (mohanes). The cacidos were independent, but united in time of war. Smoke signals were used to call meetings or transmit messages.

WARFARE

Warfare, aboriginally against neighboring tribes and later against the Spaniards, was the main preoccupation of the *Pijao*. They fought bravely and well, and several times attacked the new Spanish settlements of Buga, Cartago, Ibagúe, Neiva, Timaná, and La Plata. With their bodies covered with bixa, the peculiar odor of which often betrayed their presence in ambush, they attacked during the day or night, with much yelling and music, and often succeeded in surprising their foe. They were expert swimmers, and could cross the Magdalena River with a young prisoner in each hand.

Prisoners of war were sacrificed and the war dead were eaten. The *Pijao* kept the skulls as trophies, which they piled up and covered with a net, after removing the teeth to make necklaces.[16] Their ideal of valor caused them to endure the pain of wounds, torture, and dismemberment by wild dogs, to which the Spanish subjected them, without uttering a complaint.

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[15] An old song about the chieftain, Don Baltazar, is still popular in Colombia. It reads, "Spear, do not fall on the ground—because the Pijaos are coming." Another one says, "Such was the strength of Don Baltazar that he is said to have strung a hundred and fifty men on his spear."

CANNIBALISM

All historians agree that the *Pijao* were a particularly cannibalistic people, and that they even held public sales of human flesh on a little hill called Carnicerías. In a passage in Ordoñez de Ceballos (1938), the Spanish view is expressed thus:

> and now the Indians eat all neighboring nations but their own, and they eat all the Spaniards, saying that their flesh is the most delicious; they also eat the Negroes; they used to eat the friars, and in consequence of the many deaths resulting from having eaten one of them, they no longer eat them, but still kill them. They spare only the clergy.

One historian, however, unconsciously gives the probable explanation of cannibalism in saying that they killed a distinguished warrior of their own tribe with his approval, divided his body, and ate it to become as brave as he (Simón, 1882–92, Noticias Historiales, vol. 1, Primera Noticia, ch. 4, p. 7).

Pijao cannibalism was, therefore, simply a magic rite, through which the valor and strength of an enemy felled in battle or of a distinguished warrior were acquired by other men.

ESTHETIC AND RECREATIONAL ACTIVITIES

The *Pijao* held religious and military dances, during which they danced, drank chicha, and chewed coca. Their music, especially martial music, was played on a large sea shell hung from the neck, small trumpets, and flutes.

Sculpture in wood and clay was in general limited to religious idols, the faces of which were painted with yellow and red stripes and the bodies with bixa, just as they painted themselves when going to war.

SICKNESS AND DEATH

Shamans (mohanes) practiced magic and administered herbs. These Indians also had an interesting anesthetic: they poured cold water over the body of a sick person until he became insensitive.

The dead were buried in vaults dug for this purpose or in caves, and were accompanied by food, drink, and weapons. Each relative entered the tomb before it was covered to speak final words to the deceased.

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[16] Simón, 1882–92, *Septimé Noticia*, ch. 31, p. 254, vol. 5. Archeological research in 1941 uncovered several of these necklaces of perforated human teeth, in frontier regions between the *Páez* and the *Pijao*.

RELIGION

Idols or statuettes of different sizes made of clay or wood give some idea of *Pijao* deities. "Lulumoy," which means "Great God," was a monumental statue of stone with three heads, six arms, and six legs, and was worshiped in the region of the Organos, to the west of the Neiva Valley. This is the only stone idol mentioned in the chronicles. In the Province of Cacataima, the *Pijao* worshiped a large wooden idol called "Eliani." In Otaima, before the house of a shaman, they had an idol in the form of a *Pijao* Indian, at whose feet were placed gifts of spears, darts, and stone missiles.

In some provinces, a man purposely killed, provided he was not of the same tribe or of an enemy tribe, became a guardian. The soul of the slain man, having departed blamelessly from life, was supposed to remain for a while to protect the killer and his family. Since this protection would wear off in time, the family head would later seek another man, woman, or child with the requisite qualities and kill him for a protecting divinity (Piedrahita, 1688, ch. 2, book 1).

The *Pijao* believed in the reincarnation of the soul in animals, such as the deer.

Shamanism was highly developed. Shamans or priests (mohanes) fasted in preparation for war expeditions and forecast events from the flight of birds or from the ashes of burned balsa wood. White ashes foretold success; gray, an uncertain outcome; and black, defeat. The shaman was responsible to his people for his predictions. If the war party succeeded, it gave him all the spoils and trophies, which he distributed. If it failed, he had to pay blankets or other objects to the families of those who died. Old women could also become shamans, priestesses, or diviners.

Magic power could be transmitted by objects, such as hair of the puma, jaguar, or monkey, and feathers of the sparrow hawk, which they kept in small calabashes. Puma hair made them brave, monkey hair gave ability to climb, and feathers made them swift. A belief in magic power underlay a charm cast against the Spanish:

> In a specially prepared ground, cleared of underbrush, two heavy branches were placed at a fair height, between two trees. Over them 12 small wooden idols were placed, their bodies painted red with achiote and the faces adorned with yellow and red streaks, in the manner of the warrior Indians. They were dressed from the waist to the feet with rags and papers which had been taken from the Spaniards at Ibagué. Beside this, they balanced a stone weighing two arrobas (50 pounds) on a trunk, and under it they placed a cricket, tied by a fine thread. Near it they put a little masato or chicha. On the ground, opposite the stone, there was a wooden idol as large as an 8-year old child, holding in one hand a dart and in the other a spear, with some arrows at its feet. As the idols were turned toward the Spanish camp, they fought with magic power against the soldiers, who were represented by the cricket, which could be crushed by the stone which covered it. [Simón, 1882–92, séptima noticia, vol. 5, ch. 40, p. 287.]

Sure in their belief, the Indians valiantly opposed the Spaniards in their struggle. This faith is demonstrated in the story of a 90-year old Indian, who had been captured. As he refused to release a small wooden idol which he held and would not give up his beliefs, they "threw him alive to the dogs, which in an instant tore him apart while he uttered no other outcry than 'acaya' (woe is me), and still would not let go the idol while he had strength in his hand to hold it."

The *Pijao* were destroyed, without foresaking their beliefs or traditions or having for a moment relaxed the fight against the invaders of their country. The last *Pijao*, old Ambrosio, declared that the Spaniards might well enjoy his nation's lands, for with him the nation had come to an end.

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THE MODERN QUILLACINGA, PASTO, AND COAIQUER

By Sergio Elías Ortíz

THE QUILLACINGA AND PASTO

The present-day Indians of southwestern Colombia and northern Ecuador are remnants of the *Quillacinga* and *Pasto* (map 1, *No. 24*; map 7; map 11). They number some 50,000 and live in communities on reservations. The communities in the present Department of Nariño, in the ancient territory of the *Pastos*, are as follows:

Aldan de María, Anaconas, Calera, Chalamag, Chalapud, Chavisnán, Chiles, Chucunés, Chunganá, Colimba, Cuaical, Cualezán, Cuaspud, Cumag, Guachavés, Guachucal, Gualmatán, Guam, Guasmayán, Guastar, Igailo, Igüés, Iles, Imués, Inagán, Inagán (2nd), Inchuchala, Inchuchala (2nd), Ipain, Las Ánimas, Macas, Males, Mallama, Muellamués, Nastar, Nazate, Ospina, Panán, Pastás, Potosí, Quelapaz, Queluá, Quilismal, Quistial, San Juan, San Mateo, San Nicolás, Sapuyes, Tasmag, Túquerres, Yanalá, Yaputá, Yaramal, and Yascual.

The modern communities in the ancient territory of the *Quillacinga* are:

Anganoy, Aponte, Aranda, Botanilla, Buesaco, Buesaquillo, Canchala, Catambuco, Chachaguí, Chapal, Consacá, Gualmatán, Jamondino, Jenoy, Jongovito, Juanoy, La Cuchilla, La Florida, La Laguna, Males, Matituy, Mocoa, Mocondino, Obonuco, Pandiaco, Pejendino, Puerres, San Andrés, Santa Bárbara, Santa Bárbara de Anganoy, Santa Rosa de Cunchuy, Santiago, Sibundoy, Tangua, Terrero, Tescual, and Totoral.

All but the communities of Sibundoy, Santiago, San Andrés, and Mocoa live under special statutes, a heritage of the Spanish colony. This means that they possess the land by emphyteutic right, to enjoy in usufruct.

Physically, these natives are Indian in type. There are no blacks, mulattoes, or Indian-Negro half-breeds among them.

AGRICULTURE

Each family has a house within its respective parcel of land. The farm is laid out in a mosaic pattern for the following crops: A plot varying in size according to the available ground is for potatoes; another part is for barley, and another for maize. These are the basic items in the diet of these Indians, but a little wheat is occasionally sown. Next to the house, there is customarily a small flower garden, which is purely a business matter and not at all for adornment of the house. The Indians have raised flowers ever since they learned that the city people will buy them. Some also have small vegetable gardens, with onions, cabbages, and lettuce, but this too is merely for business reasons, since they never eat the vegetables themselves. The traditional crops have always been potatoes, maize, and barley.

Around the edges of and between the cultivated plots the Indians leave a strip of ground about 3 to 10 feet (1 to 3 m.) wide, called the "edge" or "shore" (orilla), where they keep their sheep, the family cow, and the yoke of oxen. There are always at least two sheep per family, and the affection the Indians bestow upon these animals amounts almost to a kind of cult.

HOUSES

The primitive house, according to the memory of the oldest Indians, seems to have been a sort of shed constructed among the trees. Such sheds are still made to protect the pigs and sheep from the inclement weather and even to provide shelter from the night dampness for the chagracama, or caretaker, who, at the harvest time, watches the fields to safeguard them against robbery.

The dwelling today is the choza—a crudely constructed hut of poles stuck into the earth. It has walls woven of yagua or plam leaves, plastered with mud, and whitewashed, and a pitched roof of wheat straw. These huts are low and rectangular, measuring about 16 by 33 feet (5 by 10 m.). Recently, it has become the custom to erect a little room with a small window inside the house. The chest, the Sunday clothes, and the casket or box of the patron saint of the house are kept in it. The hearth is in the principal room and consists of three stones, each a truncated pyramid, forming a triangle on which cooking pots are set. The bed or beds are fastened to the walls. Each is made of four or six poles driven into the ground, with sticks or lengths of forest shrubs laid crosswise to form the bed.

DRESS

Men's clothing consists of a hat, shirt, trousers, and poncho. Older people wear hats of pounded and blocked hard woolen felt, but the young men buy cheap and very inferior felt hats in the city. It is no exaggeration to say that the old woolen felt hats can last for a century. They were, according to the old people, brought from "above," i.e., from the south or Ecuador. All those who knew how to make them in the communities or in the city of Pasto have died, and existing hats of this type are heritages, some perhaps a century old. They have no adornments of ribbon or trimming.

The hat of hard wool felt or of imported felt is in constant use; the Indian removes it only to sleep. Anyone so unconventional as to go about hatless would be scoffed at for being queer.

The shirt is usually of linen, but as a great luxury for fiestas, it is of ordinary striped cloth. It always has some small trimming at the neck and wrists, and for great festivities some Indians have shirts with collar, bosom, and cuffs of black or blue velveteen with wool embroidery. No separate stiff collars or cuffs are reported, and undershirts are not used.

The trousers are usually of heavy woolen cloth. Most men, especially older men, use two pairs of trousers. Only the few young men who work and earn their living in the city wear ordinary, ready-made linen underdrawers. Only a few persons, however, use this item of clothing.

The poncho is also in constant use, except when it interferes with work, such as plowing or working in the city as a mason. It is one of the few symbols of wealth, for according to one's economic status, his poncho ranges from those of ordinary weave to those of woolen cloth lined with a fine blanket. Some men use two ordinary ponchos.

Women also constantly wear a hat, either of hard wool felt or modern felt, from the age of 2, when they can first keep it on. Before the age of 2, little girls' heads are covered with bright-colored kerchiefs. Young Indian women, however, take off their hats when they go into the market and when they go to church.

Women also wear a large square shawl woven of ordinary yarn, and a low-necked shirt of linen, usually trimmed with handwork or with very cheap imported lace. Young women often wear a very tight-fitting printed cotton jacket, also trimmed with cheap lace. The sleeves are always wrist-length, for it would be inconceivable that a woman should go about with bare arms. A woman's costume is completed with a series of woolen skirts, never less than three and sometimes as many as seven or eight, according to the financial status of her family. This set of skirts is called "follado," or "follones," and each has its special name: The innermost one is the "cunchina," the others are "cunchi" or "chunche," and the outer one, worn on trips to the city, is the "bolsicón." Some of the latter are made of woolen cloth, gathered into many folds, with a border of velvet or wool around the bottom. The skirts are wide and fall to the ankles. No petticoats or other kind of underclothes, not even drawers, are used by either women or little girls. The Indians look upon these as something unnecessary for morality. In their native villages, almost all the Indian women go barefoot, but some are beginning to use slippers when they visit the city, putting them on, however, just as they enter the city itself.

MANUFACTURES AND TOOLS

Tools.—The Indians use extremely elementary implements, all of Colonial types: the plow drawn by a yoke of oxen, the shovel, the ax, the machete, and the gualmo, a stick or flail for threshing. They have no desire whatever to obtain or to use modern machinery. Gradually, but in appreciable quantity, the crowbar and the pickax have joined their array of tools. In masonry, they use only the trowel, a long, strong horizontal rope to trace walls, and a long board or ruler to plaster walls. One who considers himself a "master" uses a level, carries a folding wooden ruler, and employs a form or mold for constructing mud walls. His instrument par excellence is his plummet, which he cherishes with an almost paternal care. The form consists of two pieces of wood, each about 4 feet (1.2 m.) long by about 5½ feet (1.8 m.) wide, with its respective appliances. The two men who actually build the wall use tampers to pack the mud. Two others carry the mud. This group of four is called a "cuadrilla," or gang of four persons; the tampers are better paid.

Weaving.—A very few Indians weave woolen cloth on looms in their homes. The author counted five looms that are operating regularly in each village. This craft is very old and, according to some of the old people, was introduced long ago to the *Guacano*. These looms appear to be the same as those which the Indians of Ecuador and Perú now use. The loom is of wood, arranged to give easy movement to the thread and comfort to the worker. It generally stands in the middle of the room in the house. The cloth is always of wool, and is made in sizes ample for shawls, ponchos, and blankets of two- and three-thread weave, the best of the town. The designs are of simple lines of color, the dyes being bought in the city. It is said that the ancient designs, which were generally animal or floral figures, have been forgotten, and the dye that used to be brought from Caquetá has fallen into disuse, because the Indians of Sibundoy, who carried on that business, can no longer obtain it. It is certain that present-day manufactures do not look like the old ones.

The weavers do not work for themselves, but for other people in their own or other communities and even in the city. For each job, the client brings the wool, already wound on reels, to the weaver, in an amount fixed for each kind of cloth, and the weaver then works it into cloth at a low price.

A primitive type of loom (haguanga) is used in the majority of homes. It consists principally of two round bars (cumueles) on which the warp is wound. The weft is on a bobbin (sikse). A stick of chonta palm serves as a weaving sword. Today, the loom is rarely used for ponchos, and is disappearing completely before the modernized loom.

PROFESSIONS AND TRADES

Apart from farm work, the Indian has for many years done day work or manual labor in the city, especially in the construction of houses. Miguel Triana (1907) observed such labor more than 20 years ago. About 80 percent of the men of both regions are masons. They begin the trade as small boys, even before adolescence, learning to pulverize lime, scour bricks or tile, compact clay, etc., until eventually they become skilled workmen or "masters," i. e., builders of houses, always in the Colonial style. Some now work with cement and build houses according to modern construction, except that they do not use reinforced concrete, which has scarcely been introduced in the city. As a mason, the Indian constantly observes the skilled city workers, and wants to imitate, even to surpass them, and offer them competition—a competition that has become stiffer every day, if one takes into account the cheapness of the labor and the earnestness the Indian puts into his work. This field in particular offers evidence of the extraordinary potentiality of the Indian for incorporation into the national life, and continuous experience is demonstrating that he is a very skilful and economical laborer. He fulfills his obligations to the extent that his farm work permits, and makes no noisy complaints, knowing nothing of strikes, theories, accident compensation, and other such items.

COMMUNITY LIFE

The Indians have meetings called mingas (meetings for cooperative work) at the construction of houses, at marriage festivals, and at mourning ceremonies for the dead.

MARRIAGE

In former times, a marriage was arranged by the fathers of the future spouses without their knowledge. The young man's father would visit the girl's father, bearing gifts (eggs, potatoes, ullucos, etc.). The two men would discuss everything imaginable except the principal business of the visit; the gifts, however, made the purpose plain.

After the wedding, the bridegroom distributed sweetmeats among the guests, who were usually relatives or intimate friends of the two families. All went to the town, where they drank chicha and sometimes, according to the finances of those concerned, aguardiente. (They never drank wine, which the Indians even today find insipid and unpalatable.) Then the musicians arrived, and the dancing began to the sound of bambucos (Colombian popular airs) or of some of the sad ancient tunes. Old songs suitable to the occasion were sung. The dances, as today, were not performed in couples. A pair kept time with their feet, the man following the woman and making turns about her. Then, as today, both men and women carried a red handkerchief or a bunch of rooster's tail feathers. The dance steps were short. One step forward for the woman, with one step double, like a limp; and one oblique and two straight steps for the man.

ESTHETIC AND RECREATIONAL ACTIVITIES

Games.—The only sport is a very old and entertaining ball game, played on Sundays in an open waste space in front of the church or the school. It is played both in the city and in the mountain villages. It remotely resembles the Basque ball game, and a little money is bet and much exercise gained. The Indians play cards or other games of chance or gambling.

Songs.—The Indians state that once they had their own songs, but these have all been forgotten in recent years, because no one understood the meaning of the words. When somewhat intoxicated at a festival, they sing songs that they learned in the city, uttering a penetrating shout in the middle and always prolonging the final notes.

They are very fond of music, particularly the melancholy Ecuadorean tunes, which, however, are also being forgotten. An old man stated that the musicians of olden times knew how to play well, but that modern music is harrowing. The little bands of musicians now play only the airs of the city. These are learned by ear and played ad libitum, with the final notes of the musical phrase prolonged in the style which distinguished the ancient tunes.

MEDICAL PRACTICES AND BELIEFS

Sanitation.—Good health habits are unknown. Baths, for example, are virtually unthinkable, although the region has many excellent streams. Some young Indians may bathe once or twice a year, but one person more than 70 years old does not remember having bathed since childhood, although he has remained comparatively healthy. During childhood, i. e., under the age of 3 (after which the child is called guambra, young boy or girl), a child is bathed by its mother from time to time without soap. Young marriageable women wash their faces and feet in the streams before entering the city as a form of coquetry, and men wash their feet when they go to buy new sandals, but never their hands, even though they are dirty at mealtime. When shaking hands in the city they wrap their hands in their ponchos as a sign of respect rather than of embarrassment. Women comb their hair rarely and men not at all. They cut it only for some religious function, and trim their fingernails only when necessary.

Sickness.—The Indians believe that sickness is caused by unknown influences, invisible and diabolical. In these beliefs, he appears to have preserved his early culture in greatest strength.

All communities hold the concept that sickness comes from a bad wind or from the evil eye. The cures correspond to the diagnoses. The bad wind may lodge in the stomach, which is the Indians' most common ailment because of their heavy meals, chicha drinking, and other indulgences. It may also enter the water fall (chorrera), because of invisible powers and ghosts (duende), or the soul, as when one has been exposed in open places or at certain evil hours of the night. The evil eye, which subjects both men and beasts to intestinal disturbances, is given by a person who possesses extraordinary powers in his gaze and wishes to do harm. For each of these illnesses there are special practices and remedies.

Shamans.—Every Indian community has one or several curanderos (medicine men or shamans), the most accredited of whom are women. When the shaman is called, he first orders that burning firewood and three tullpas, i. e., three hearths, with three stones each, be prepared. Next, according to the case, he asks for espingo (a rind of acrid taste), aguardiente, rosa amarilla (a native emmenagogic plant), and tobacco. The shaman puts a little of each substance in his mouth, chews it, and then sucks the patient's head, temples, breast, back, stomach, coccyx, hands, and feet. He then blows out part of the contents of his mouth on the most affected part, while pronouncing unintelligible words, which the Indians say are prayers. With a burning stick in his hand, he makes several turns around the invalid and finally takes a machete and cuts the air in the form of a cross. At the end of the performance, he takes off his hat, poncho or shawl, and, if a woman, the series of skirts, leaves them where they fall, and then runs out, scowling as if angry. When children are being treated, the curandero passes them three times over the tullpas, holding the sick child a moment above each one.

For prolonged illness that the local curanderos cannot cure, another medicine man is sought as the last resort in Sibundoy, a day's journey away. He comes, looks at the sick person, and returns to his village. The patient's family is confident that salvation will be forthcoming, and when the curandero returns, everyone leaves the room, because his administrations cannot be witnessed. For this reason, it is impossible to describe the curing methods used by the Indians of Sibundoy.

THE COAIQUER

PRESENT HABITAT

The *Coaiquer* now occupy the territory bounded as follows: On the north, the left bank of the Guabo River to its confluence with the

Cuaiquer River, one of the major affluents of the Mira River; on the south, the banks of the San Juan River, also an affluent of the Mira, to the region called Mayasquer; and on the east and west, forming a kind of triangle, the regions of San Martín and Miraflores and the confluence of the Guiza and the Mira Rivers. This territory, which is considered public land, has an approximate area of about 3,000 miles (5,000 km.). The Colombian portion of it is inhabited by 2,000 Indians, the Ecuadorean part by 200. These seem to be full-blood Indians.

CULTURE

The *Coaiquer* speak the *Coaiquer* language, which belongs to the *Chibchan* family. They still live in a primitive state (Ortíz, 1937 d), leading an independent, almost nomadic existence, preferring the life of the forest; few are settled in villages. They travel without beds and ask hospitality of no one, not even acquaintances, close friends, or godparents. They curl up on the ground, scarcely even protected by a roof and undisturbed by the inclemencies of the weather.

They always cut their thick, black hair to the nape of the neck. They wear cheap linen drawers and a poncho or long skirt of the same cloth which extends halfway to the ankles, but have no ornaments. At tribal fiestas some individuals paint their foreheads, cheeks, and noses with bija (bixa, *Bixa orellana*).

The *Coaiquer* marry according to their ancient custom. The couple first lives together for a year in a trial marriage, after which time the man may or may not choose to have the union confirmed. If he refuses permanent wedlock, the woman can make no claim on him.

Habitual use of coca is disappearing among the present-day *Coaiquer*, but according to old traditions, these people once chewed coca leaves as a sort of national rite, the nature of which is unclear.

In their funerals, the *Coaiquer* preserve in part their ancient customs. The corpse is arranged in the house and portions of the favorite food of the deceased placed around it, after which an all-night watch is held over it.

Gutiérrez (1850) states that in case of epidemics the *Coaiquer* establish a sanitary cordon to isolate themselves. If someone falls victim to the disease, they destroy the bridges and go away to more open spaces, leaving him in the camp in the care of a person who has already had the illness.

THE MOGUEX-COCONUCO

By Henri Lehmann

HABITAT AND TRIBES

In Colombia at the time of the Conquest, the Popayán Valley and the mountains that surround it were densely populated. A great number of tribes, most of them agricultural, lived in the valleys and on the fertile hills (map 1, *No. 24*). These formed the *Moguex-Coconuco* group (map 7), to which the following tribes belonged:

Pubén.—The Indians of Popayán, including those of Santa Bárbara, Pisojé, Julumito, Genagra, and Puelenje.

Coconuco.—Along the Río Grande, between San Isidro and Paletará. The Puracé volcano bordered this area to the north, the upper Cauca River to the south.

The Indians on the hacienda of San Isidro belonged either to the *Pubén* or to the *Coconuco,* their neighbors.

Puracé.—North of the volcano, between San Isidro and the páramo of Moscopán. They lived on both banks of the Vinagre and San Francisco Rivers. The Quintana region, in which lived the *Polindara,* their neighbors, constituted the northern border.

Polindara.—On both banks of the Palacé River, between Malvasá and Las Guacas. Their southern neighbors were the *Puracé,* their northern neighbors the *Totoró,* and the western ones, the *Pubén.*

Totoró.—On both banks of the Cofre River, between Malvasá and Miraflores. Their neighbors to the south are the *Polindara,* to the north the *Ambaló,* to the northwest the *Paniquitá,* and, toward the Malvasá region, the *Guambía.*

Moguex (*Guambía, Moguez*).—On both banks of the Piendamo River and the Manchay River between the Cordillera (Malvasá, Páramo de las Delicias, Páramo de las Moras) and the village of Silvia. Their neighbors are the *Ambaló,* to the southwest and to the northwest, the *Totoró,* to the south, and the *Páez* to the north. The immigration of this tribe toward Tierradentro, as far as the neighborhood of Inzá, is recent. *Moguex* is the *Páez* name for this tribe; *Guambía* or *Guambiano* is commonly used. (See this vol., pp. 937–956.)

Ambaló.—Between the Ambaló hacienda and Malvasá. The Indians in Camojó and Quisgó belong to the same group. Their neighbors are the *Moguex,* the *Totoró,* and to the north, the *Páez.*

Tunía.—In the mountains surrounding the village of Tunía.

Guanaco.—To the east of the páramo of Guanacas, between the páramo and the Inzá region (Tierradentro), south of the Ovejas River. The *Guanaco* were surrounded by *Páez.* This was the only tribe of the *Moguex-Coconuco* group to live on the eastern slope of the Cordillera Central.

Chisquío.—Called *Cochesquio* by Cieza de León. Probably included the Indians of Piagua, Achinte, Alto del Rey, Chapa, and Pandiguando, at the foot of the Cordillera Occidental.

Palacé.—Mentioned only by Cieza de León (1862). They probably lived to the north of the *Pubén.* It is possible that the Indians of Mojibío belonged to the *Palacé* group.

Colaza.—Mentioned only by Cieza de León. May possibly be identified with *Calusé.* Cieza's rendition of native names is rather faulty. If this identification is correct, we are probably confronted with a group belonging to the *Pubén.*

Guamza.—This place name, as transmitted by Cieza de León, has not survived, but it is certain that these Indians belonged to the *Moguex-Coconuco* group. "Guam" or "wam" means language or dialect amoung the *Moguex.*

Pedro Cieza de León (1862) and Pascual de Andagoya (1892) were the first chroniclers of this area. Cieza says that in the 16th century the *Guambía* (*Moguex*) province, which was once densely populated, lay east of Popayán, and that another province, also to the east, is called *Guamza.*[1] Other Indian villages, according to Cieza, were "Maluasa, Polindara, Palacé, Tembío, and Colaza."

Many well-populated valleys were located in the neighborhood of the Sierra Nevada. The *Coconuco* lived in the upper Río Grande (now the Cauca River) region. Their customs seem to have been comparable to those of the above-mentioned Indians, except that they did not eat human flesh. "Zotara" was the next village. Farther south was the province of the *Guanaco,* and toward the east the province of the *Páez.* This description is inaccurate, for Guanacas is located to the east of Malvasá and to the west of Páez, between the páramo of Guanacas and the region bordering Inzá.

Toward the east was the province of "Guachicone," also densely populated. It is uncertain whether Cieza includes among these Indians those near the source of the Guachicono River, in the Sotará Mountains, farther down in the valley, near the Patía River.

On the western slopes of the Cordillera Occidental, Cieza mentions a village called Cochesquio, located toward the south, a small lagoon, a village, and a river called Las Juntas. Then come the following, farther toward the south: The Río de los Capitanes, the great province of the *Mastel,* and the village of Patia. Cochesquio may be identified as Chisquió, since the small lagoon of El Tambo is located not too far from this point. The place name Las Barrancas has not survived, but "Las Juntas" is now the name of a river. "Capitanes" is still the name of a region and of a river. "Masteles" was probably the name of the region located between Capitanes and Patía. Archeological remains are to be found there in great numbers. The oldest *Sindagua* may be located in the same region, where there are two little rivers, one a tributary of the Timbío River, the other of the Mamaconde River.

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[1] I have been unable to locate this name in the toponymy of that region.

Pacual de Andagoya's text reveals the approximate northern border of the *Popayán* language, in his description of the road from Cali to Popayán. Whereas the Indians who spoke *Xitirigití* lived in the Cordillera Occidental, in the valley of the San Juan River, the Indians who spoke the *Popayán* language lived in the southern part of an east-west cordillera which meets the Cordillera Central. This could be the mountain called La Teta, and the region located near Quilichao.

As Andagoya's reliability cannot be doubted, the *Popayán* language must have extended to the end of the Cauca Valley.

Although the other languages have disappeared, the *Popayán* language still exists in the *Moguex*, *Totoró*, and *Polindara* dialects. About a hundred years ago, the *Coconuco*, the *Puracé*, the *Tunía*, and the *Guanaco* were still speaking their respective languages. On the contrary, however, all the Indians who lived in the Popayán Valley proper, the *Pubén*, and the people of Zarzal, Piagua, Alto del Rey, Achinte, Chapa, and Pandiguando, which Brinton probably considers as belonging to the *Chisquío*, had long since forgotten their tongues, as had all the other Indian tribes between Popayán and Patía.

The theory that Indians belonging to the *Moguex-Coconuco* group lived in the above-mentioned regions is confirmed by the study of toponymy.

The ending "bío" is not found in the *Moguex-Coconuco* language. According to Jaime Arroyo (1907, pp. 85–86), who does not cite his source of information, it means "water." Thus, Pusambío would mean "río ácido" and Chiribío, "río frío." The present author has found no confirmation of this claim. Place names ending with "bío" are

Toribío
Cajibío
Guangubío
Mojibío
Gwalimbío
Calibío
Tavío
Anambío
Pusambío
Chiribío
Timbío
Pambío
Urbío

Compound names with the suffix "cé" probably come from the *Moguex-Coconuco* language. Examples of common names are: puracé, "maize"; pala-cé, "the top"; and kalu-sé, "ear." "Cé" occurs in: Palacé, Calusé, Quilcacé, and Camucé (a family name). Iscancé and Descancé are beyond our region, to the southeast. On the other hand, Toribío is in *Páez* country, where the language is very different from that of the region of Popayán. The occurrence of both endings, "cé" and "bío," in more or less the same territory may indicate the former presence there of two distinct linguistic groups.

The suffix "bala," "vala," or "wala" now exists in the following place names: Calaguala, Pisímbala or Pisámbala, Wichavala, and in Tunuvalá, or a Tonovalá, family name which occurs rather frequently among the *Moguex*.

The prefix "pi" is the most frequent of all. It is found in the entire region and in a great number of family names:[2]

TABLE 1.—*Occurrence of the prefix "pi"*

Guambía	Guanacas	Coconuco	Puracé	Polindara
*Pillimué *Pillinnio *Piramo *Pinso	*Pillimuecho Pil *Pisoxe *Pinguaguel *Pipai	Pisanrabo Pinintsigo Pisochago Pisambala	*Piso *Pichini Pilambala	*Pichiquilla *Puilinduc *Pichiculla *Pilinduoc
Pisimbala	Sta. Barbara	Tunía	Las Piedras	Totoró
Pisimbala *Piquimba	Pisoxe *Pirullo	Pisitau	*Pil	*Pilay
Zarzal	Ambaló	Piagua	Julumito	Calusé
*Pisamin *Pichinguilla	*Pirinchul *Pillinueg *Pichom *Pillimue	*Pichiguilla	*Bisasoz	*Piagua

Neighboring tribes.—The neighboring tribes to the southeast were the *Quillacinga* whose domain extended to the Sotará and upper Cauca Rivers. To the south, the *Patía* separated the *Moguex-Coconuco* from the *Pasto*, in whose territory are found archeological remains of the Ecuadorian type. Influence from Ecuador is felt as far as the Juanambú River, but it does not extend beyond the Mayo River, borderline of the *Inca* conquest. To the west the tribes of the western slopes of the Cordillera Occidental extended to the coast. Many of these Indians were *Chocó*, who will be described in Volume 4 of the Handbook. To the east lived the *Andaquí* and the tribes of the region of San Agustín, who are described in this volume (pp. 936–937). To the north live the Cauca Valley Indians, who were on friendly terms with those of the Popayán Valley. They are described in the fourth volume.

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[2] The starred words are family names, the others place names.

CULTURE

SOCIAL AND POLITICAL ORGANIZATION

We know very little indeed about the social structure of these tribes. Tradition has it that the *Pubén* cacique lived on the small artificial plateau near the town of Popayán, where the mill of Moscopán now stands. We do not know whether he was chief only of the *Pubén* or whether he had other tribes under his domination. It seems, however, that several Indian tribes formed a confederation. The Indians who fought the advance of Belalcázar in the neighborhood of El Tambo belonged to several tribes, who had united to fight the Spaniards, and we may infer that there existed among them a relative subordination of tribal interests at that time. But apart from this, we have no information concerning the nature of their government.

General Mosquera wrote (1852, p. 42 ff.) of the social organization of the *Pubén* and *Coconuco:*

> They have a supreme chief, called Yasguën, who is like a king. The caciques governed divisions of peoples (pueblos); under them were the caschus, the equivalent of governors. [The word] carabic designated lesser authorities who were comparable to mayors.

On the modern Indian reservations, the system of government is based on ancient tribal laws which were changed and unified by the colonizers and, later, by the legislators of the Republic. All reservations now have a native cabildo, formed by a governor, one or two mayors, and several policemen (alguaciles). The Indians of Guambía today designate the mayor (alcalde), the governor, and other leading men as "karowíx" (equivalent to Mosquera's "carabic"), which seems to mean "superior."

According to Andagoya, there were 100,000 houses in the vicinity of the Popayán Valley, which would indicate a total population of 500,000. The historian Sergio Arboleda, editor and author of part of the "Historia General de la Gobernación de Popayán," by Jaime Arroyo (1907), thinks that this is too high a figure; according to him, the total population of the Popayán Valley did not exceed 100,000. Be that as it may, the neighboring hills show numerous remains of dwellings as well as signs of previous cultivation.

CANNIBALISM

According to the chronicles, all the Indians were primitive cannibals except the *Coconuco.* It seems that such customs have often been grossly exaggerated in order to justify the acts of cruelty committed against the Indians.

RELIGION

We have practically no information on religion. It is said that they worshiped the sun and the moon, but no details are given in support of this statement. It seems certain, however, that the Indians worshiped certain natural sites. In the vicinity of the village of Pitayó, e. g., there is a mountain rock which is still called "Piedra Santo." Tradition has it that a saint lives inside the stone. People come from everywhere to bring him offerings. It is safe to assume that this is an ancient belief. This rock, located in a rather isolated spot, was formerly a native shrine, filled with spiritual and magic forces. Catholic missionaries took advantage of this. They took over the stone, stating that it was consecrated and that a saint really lived inside it.

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GLOSSARY

The source of the words is given in parentheses, the abbreviations being as follows: Q., *Quechua*; Sp., Spanish; Ay., *Aymara*; Ar., *Arawak*.

Achiote (Sp.). A red paint or dye made from *Bixa orellana;* also called bixa.

Agregado (Sp.). See Forastero.

Agropecuarian. Subsistence based on combined farming and herding.

Aine, ayni (Q.). Loan of objects or labor against equivalent return.

Alcalde (Sp.). A judicial and administrative officer in villages, towns, and municipal districts, usually appointed; in Indian settlements, an Indian officer. The alcalde mayor corresponds to a mayor and chief magistrate.

Alcalde de vara (Sp.) Official governing a barrio, the smallest political division (so named because of his staff, or vara).

Alférez (Sp.). Standard-bearer; a minor and inexpensive cargo.

Altiplano (Sp.). High plateau, specifically in southern Perú and Bolivia, including Lake Titicaca.

Amauta (Q.). *Inca* group of learned men.

Andén (Ay. ?). Agricultural terrace, secured upon hillsides by means of retaining wall.

Anexo (Sp.). (*a*) Outlying section or suburb; (*b*) political division, being part of a district and composed of barrios.

Antara (Q.). Panpipes.

Apacheta (Q.). Wayside heaps of stones, ritually accumulated by Indian travelers.

Arroba (Sp.). A measure of weight equal to about 25 pounds, or of liquid equal to about 4 gallons.

Audiencia (Sp.). Judicial tribunal, with or without executive power, presided over in Perú by the Viceroy.

Ayllo, aylyo (Q.). The bolas, or weighted throwing cord.

Ayllu (Q.). (*a*) An association of families united by community, territorial, and genealogical links; (*b*) Colonial settlement, larger than an estancia (cattle ranch) and smaller than a pueblo (village).

Balsa (Sp.). A raft made of bundles of light reeds.

Barrio (Sp.). A division, ward, or precinct of a town.

Bayeta (Sp.). A baize, or woolen cloth.

Bracero (Sp.). Coastal agricultural or industrial proletariat.

Cabildo (Sp.). Town council.

Cacique (Ar.). West Indian term used in the Andes to designate a chief, whether hereditary or appointed. (See Curaca.)

Camarico (Sp.). Parishioner's presents to his curate.

Camayo (Q.). Servant. (See Yanacona.)

Camisa (Sp.). Shirt.

Cargo (Sp.). Any civic or lay responsibility.

Ceja de la Montaña (Sp.). Upper portion of the Montaña, the eastern slopes of the Andes.

Chacra (Q.). Any parcel of agricultural land.

Chaquira. Bead.

Charqui (Q.). Dried (jerked) meat, usually llama.

Chasqui (Q.). Messenger, long-distance, afoot or mounted, originally *Inca*.

Chicha (Q.). Native beer, usually of fermented maize.

Cholo,–a (Sp.). An Indian or Mestizo.

Chullpa (Ay.). See this volume, pp. 505–506 and pl. 101.

Chuñu (Q.). Potatoes dehydrated by freezing.

Chupe (Q.). Potato soup, with seasoning of salt and pepper.

Chuspa (Q.). Carrying bag, part of masculine costume.

Cofradía (Sp.). Lay association, within Catholic society; a sodality.

Collao (Q. ?). A district of the South Highlands around Lake Titicaca (not to be confused with *Colla*, an *Aymara* division).

Colono (Sp.). Highland laborer, occupying land on sufferance, in return for labor. Also, any farmer.

Comunidad (Sp.). Settlement of free Indians enjoying the communal use of land.

Concierto (Sp.). Contract. Used, locally, as a name for a peon on an hacienda.

Conopa (Q.). Individual, family, or household fetish.

Conquistador (Sp.). An original Spanish conquerer.

Contribución de indígenas (Sp.). Early Republican form of tribute-levy.

Corregidor (Sp.). Crown official, magistrate.

Corregimiento (Sp.). Office or district of a corregidor.

Criollo (Sp..). (*a*) White born in the New World; (*b*) sometimes a mixture of White and Indian.

Cui, cuy (Q.). Guinea pig.

Curaca (Q.). The class of Indian municipal chiefs, often enjoying a hereditary status. (See Cacique.)

Cushma. A full-length robe made of one or two pieces of cloth, with a slit for the head, with the sides sewed together; sometimes with sleeves. (See Handbook, vol. 3, pl. 50, *right*.)

Ejido (Sp.). Public land reserved for pasture and future growth of community.

Encomendero (Sp.). An individual or institution enjoying the use of Indian tribute assigned for limited periods (usually three generations).

Encomienda (Sp.). An assignment of Indian tribute to individuals or institutions.

Faena (Sp.). Communal labor on public or ecclesiastical works.

Fanega de tierra (Sp.). Land measure of 1.59 acres.

Forastero (Sp.). Indian participating in the life of the commune but discriminated as a recent immigrant and subject to different tax schedules and ground rents. Same as agregado.

Gamonalismo (Sp.). The institution of large landholdings. (See Latifundismo.)

Hacendado (Sp.). The owner of an hacienda.

Hacendero (Sp.). The worker on an hacienda.

Hacienda (Sp.). A landed estate.

Hanansaya (Q.). Upper moiety in an *Inca* settlement.

Hatunruna (Q.). The common tribute-payer.

Hilacata (Q.). See Ilacata.

Huaca (Q.). (*a*) Pre-Conquest edifice or burial; (*b*) anything sacred.

Huaranga (Q.) *Inca* administrative unit of 1,000 tributaries.

Huminta (Q.). Maize bread like the Mexican tamal (festive).

Huno (Q.). *Inca* administrative unit of 10,000 tributaries.

Hurinsaya (Q.). Lower moiety of an *Inca* community.

Ilacata, hilacata (Ay.). Local chief or leader.

Ilyapa (Q.). *Quechua* God of Thunder, later identified with Santiago.

Inca (Q.). Used in the Handbook as the ethnic group. Also, the Emperor of the *Inca*.

Intendencia (Sp.). Spanish administrative unit (late 18th century).

Kero, quero (Q.). Beaker or cup.

Lengua general del ynga (Sp.). Sixteenth-century term for the *Quechua* language.

Latifundia (Sp.). Large landed estate.

Latifundismo (Sp.). The institution of vast landed estates worked by peon or contract labor at a low technological level.

Llantu (Q.). Turbanlike head band.

Lliclla (Q.). Square shawl gathered at breast (women's dress). Most distinctive item of Highland costume.

Máchica (Q.). Barley or maize flour.

Mallqui (Q.). Mummy.

Mandón (Sp.). Lesser Indian municipal official.

Mayordomo (Sp.). Civil or ecclesiastical official.

Mestizo (Sp.). Mixture of White and Indian.

Mingay, mincay (Q.). Form of voluntary substitute labor; also the mutual rendering of services in the form of collective labor.

Mita (Q.). Draft-labor obligation in agriculture and industry.

Mitana (Q). Female servant, equivalent to pongo.

Mitayo (Q.). Draft-laborer.

Mitimae (Q.). The class of colonists used by the *Inca* to consolidate their political territory.

Montaña (Sp.). Sylvan zone below Sierra east of the Andes.

Montuvio (Sp.). A mixed-blood of White, Indian, and Negro origin on the Ecuadorian Coast.

Neo-Inca. The separatist rulers of the *Quechua* from Manco Inca (1536) to Titu Cusi (died 1572).

Obraje (Sp.). Textile factory.

Originario (Sp.). An older established settler in a community.

Pacarina (Q.). Legendary or mythical place of origin of an ayllu.

Pachaca (Q.). *Inca* and colonial administrative unit of 100 tributaries.

Padrino (Sp.). (*a*) Lesser ceremonial cargo; (*b*) godfather.

Pago (Sp.). Dispersed settlements of a few families.

Panela (Sp.). A crude brown sugar.

Páramo (Sp.). High, wet, brush and grassland.

Parcialidad (Sp.). Territorial division within a settlement.

Peon (Sp.). Day-laborer, particularly agricultural.

Pirca (Q.). Dry-stone wall.

Pisca pachaca (Q.). *Inca* and colonial administrative unit of 500 tributaries.

Poncho (*Araucanian*?). Slit-neck, blanketlike cloak.

Pongo (Q.). The domestic servant of a landowner, selected by draft from among the colonos.

Propios (Sp.). (*a*) Public lands of which the income was reserved for the municipality; (*b*) unremunerated Indian carriers and transport workers.

Pucara (Q.?). A fortified site.

Puna (Q.). High, dry grass country.

Punchao (Q.). The image of the Sun; word for "day."

Quebrada (Sp.). A canyon.

Quechua (Q.). The most numerous Indian group in western South America; the dominant Indian language.

quechua (Q.). Deep Highland ravine or valley.

Quipu (Q.). Knotted string recording and mnemonic device.

Real (Sp.). Basic unit of Spanish coinage, of which 8 to 13½ formed the various values of the peso.

Real patronato (Sp.). The patronage exercised by the Crown over Church appointments in America.

Reducción (Sp.). Administrative resettlement of dispersed Indian groups in new urban centers.

Repartimiento (Sp.). (*a*) Colonial assignment of Indian labor to the Crown, private individuals, or institutions; (*b*) mandatory purchase of merchandise by Indians from Colonial officials (corregidores); (*c*) administrative and territorial division (Colonial).

Reparto de efectos (Sp.). Enforced sale of merchandise to Indians by civil officials.

Sapayapa (Q.). Native foreman on landed estates.

Segunda persona (Sp.). Indian community official.

Sínodos (Sp.). Clerical stipends.

Style. In archeological terminology, a style is usually a combination of form and decoration that characterizes a broad group of ceramics and often of textiles, metal objects, stonework, and other handicrafts. Its particular expression in a special place or period is called a type.

Taclla (Q.). Indian foot plow.

Tambo (Q.). Way station along road or trail.

Tipoy. A full-length garment made of a tubular piece of cloth and pinned over the shoulder.

Tomín (Sp.). Spanish coin worth 2½ reales.

Topo (Q.). *Inca* land measure; measure of area, distance, and volume.

Totora (Q.?). *Scirpus tatora*, giant reed common in Perú and Bolivia.

Trapiche (Sp.). A sugarcane mill constructed with gears and rollers. (See this volume, pl. 90, *bottom*.)

Tumbaga. An alloy of gold with copper or other metal.

Tupu (Q.). Flat-headed pin to fasten dress.

Tutapay (Q.). Collective labor obligation or exchange.

Type. A subdivision of a style, occurring in a special place or period.

Vara (Sp.). (*a*) Staff of office; (*b*) measure of area and distance.

Ware. (*a*) The characteristics of a pottery vessel resulting from the materials of which it is made and the manner in which it is made, as distinct from its form and ornamentation; (*b*) less often, a very broad descriptive category with less historic specificity than "style"; (*c*) sometimes synonymous with "style" or with "type."

Yanacona (Q.). (*a*) *Inca* servant class; (*b*) Colonial vagrants alienated from their communes; (*c*) Late Colonial communities of serfs, especially in Charcas Province.

Yungas (Q.). (*a*) Eastern zone of Cordilleran spurs, lying above rain forest; (*b*) Coastal plains and valleys.

Zambo (Sp.). A Negro-Indian mixed-blood.

BIBLIOGRAPHY TO VOLUME 2

ABBREVIATIONS

Abhandl. Königl. Gesellsch. Wissensch. Göttingen.	Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen. Berlin, Germany.
Acta Amer.	Acta Americana. Revista de la Sociedad (Sociedade) Interamericana de Antropología y Geografía. Review of the Inter-American Society of Anthropology and Geography.
Amer. Anthrop.	American Anthropologist.
Amer. Antiq.	American Antiquity.
Amer. Geogr. Soc. Research Ser.	American Geographic Society, Research Series. New York, N. Y.
Amer. Geogr. Soc. Spec. Publ.	American Geographic Society, Special Publications. New York, N. Y.
Amer. Indíg.	America Indígena. México, D. F.
Amer. Journ. Sci.	American Journal of Science. New Haven, Conn.
Amer. Mus. Nat. Hist. Handbook Ser.	American Museum of Natural History, Handbook Series. New York, N. Y.
An. Bibl.	Anales de la Biblioteca Nacional. Buenos Aires, Argentina.
An. Carnegie Mus.	Annals of the Carnegie Museum. Pittsburgh, Pa.
An. Inst. Etnogr. Amer.	Anales del Instituto de Etnografía Americana de la Universidad Nacional de Cuyo. Mendoza, Argentina.
An. Mus. Arg. Cienc. Nat.	Anales del Museo Argentino de Ciencias Naturales "Bernardino Rivadavia." Buenos Aires, Argentina.
An. Mus. Nac. Hist. Nat. Buenos Aires.	Anales del Museo Nacional de Historia Natural de Buenos Aires, Argentina.
An. Mus. La Plata Secc. Arq.	Anales del Museo de La Plata, Sección Arqueológica Argentina.
An. Mus. La Plata Secc. Antrop.	Anales del Museo de La Plata, Sección Antropológica. Argentina.
An. Soc. Cient. Argentina	Anales de la Sociedad Científica Argentina. Buenos Aires, Argentina.
An. Univ. Centr. Quito	Anales de la Universidad Central. Quito, Ecuador.
An. Univ. Chile	Anales de la Universidad de Chile. Santiago de Chile.
Anthrop. Pap. Amer. Mus. Nat. Hist.	Anthropological Papers, American Museum of Natural History. New York, N. Y.
Anthrop. Ser. Boston College.	Anthropological Series, Boston College Graduate School. Boston, Mass.
Archiv. Mus. Etnogr. Buenos Aires.	Archivos del Museo Etnográfico. Facultad de Filosofía y Letras. Buenos Aires, Argentina.
Bibl. Cent. Univ. Nac. La Plata.	Biblioteca Centenaria de la Universidad Nacional de La Plata. La Plata, Argentina.

Bibl. Ling. Amér. Paris	Bibliothèque Linguistique Américaine. Paris, France.
Bibl. Pop. Cult. Colombiana.	Biblioteca Popular de la Cultura Colombiana. Bogotá, Colombia.
Bol. Acad. Nac. Hist. Quito	Boletín de la Academia Nacional de Historia. Quito, Ecuador.
Bol. Bibl. Antrop. Amer.	Boletín Bibliográfico de Antropología Americana. Instituto Panamericano de Geografía e Historia. México, D. F.
Bol. Bibl. Lima	Boletín Bibliográfico. Lima, Perú.
Bol. Estud. Hist. Pasto	Boletín de Estudios Historicos. Pasto, Colombia.
Bol. Inst. Geogr. Argentino	Boletín del Instituto Geográfico Argentino. Buenos Aires, Argentina.
Bol. Mus. Nac. Chile	Boletín del Museo Nacional. Santiago de Chile.
Bol. Soc. Ecuatoriana Estud. Hist.	Boletín de la Sociedad Ecuatoriana de Estudios Historicos. Quito, Ecuador.
Bol. Soc. Geogr. Colombia	Boletín de la Sociedad Geográfica de Colombia. Bogotá, Colombia.
Bol. Soc. Geogr. La Paz	Boletín de la Sociedad Geográfica de La Paz. Bolivia.
Bol. Soc. Geogr. Lima	Boletín de la Sociedad Geográfica de Lima. Perú.
Bull. Bur. Amer. Ethnol.	Bulletin, Bureau of American Ethnology. Smithsonian Institution. Washington, D. C.
Bull. Mém. Soc. Anthrop. Paris.	Bulletins et Mémoires de la Société d'Anthropologie de Paris. France.
Bull. Soc. Amér. Bel.	Bulletin de la Société des Américanistes de Belgique. Brussels, Belgium.
Bull. Soc. Roy. Anthrop. Préhist. Bruxelles.	Bulletin de la Société Royale d'Anthropologie et de Prehistoire. Brussels, Belgium.
Bull. Univ. Mus.	Bulletin of The University Museum. Philadelphia, Pennsylvania.
Col. Doc. Inéd. Archiv. Indias.	Colección de Documentos Inéditos del Archivo de Indias. Madrid, Spain.
Col. Doc. Inéd. Geogr. Hist. Colombia.	Colección de Documentos Inéditos sobre la Geografía y la Historia de Colombia. Bogotá, Colombia.
Col. Doc. Inéd. Hist. España.	Colección de Documentos Inéditos para la Historia de España. Madrid, Spain.
Col. Libr. Doc. Ref. Hist. América.	Colección de Libros y Documentos Referentes a la Historia de América. Madrid, Spain.
Col. Libr. Doc. Ref. Hist. Perú.	Colección de Libros y Documentos Referentes a la Historia del Perú. Lima, Perú.
Columbia Stud. Arch. Ethnol.	Columbia Studies in Archeology and Ethnology, Columbia University. New York, N. Y.
Comp. Ethnogr. Stud.	Comparative Ethnographical Studies. Gothenburg (Göteborg) Museum, Sweden.
Congr. Int. Amer.	Congreso Internacional de Americanistas; International Congress of Americanists; etc.
Connecticut Acad. Arts Sci. Mem.	Connecticut Academy of Arts and Sciences, Memoirs. New Haven, Conn.
Connecticut Acad. Arts Sci. Trans.	Connecticut Academy of Arts and Sciences, Transactions. New Haven, Conn.
Educación	Educación. Bogotá, Colombia.

El Palacio	El Palacio. Museum of New Mexico and the School of American Research. Santa Fe, New Mexico.
Ethnol. Abt. Königl. Mus.	Ethnologische Abteilung des Königlichen Museums. Berlin, Germany.
Ethnol. Stud.	Ethnological Studies, Etnologiska Studier. Gothenburg (Göteborg) Museum. Sweden.
Ethnos	Ethnos. Mexico City, México (to 1925). Stockholm, Sweden (1936–).
Field Mus. Nat. Hist. Anthrop. Leaflets.	Field Museum of Natural History, Anthropology Leaflets. Chicago, Ill.
Field Mus. Nat. Hist. Anthrop. Mem.	Field Museum of Natural History, Anthropological Memoirs. Chicago, Ill.
Field Mus. Nat. Hist. Anthrop. Ser.	Field Museum of Natural History, Anthropological Series. Chicago, Ill.
Gaea	Gaea, organ of Sociedad Argentina de Estudios Geográficos. Buenos Aires, Argentina.
Geogr. Journ.	The Geographical Journal. London, England.
Geogr. Rev.	Geographical Review. New York, N. Y.
Globus	Globus. Braunschweig, Germany.
Ibero-Amer. Archiv.	Ibero-Amerikanisches Archiv. Berlin, Germany.
Idearium	Idearium. Escuela Normal del Occidente, Pasto, Colombia.
Inca	Inca; Revista Trimestral de Estudios Antropológicos. Organo del Museo de Arqueología de la Universidad Mayor de San Marcos. Lima, Perú.
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Inst. Ethnol. Trav. Mém.	Institut d'Ethnologie, Travaux et Mémoires. Paris, France.
Inst. Tiahuanacu Antrop. Etnogr. Prehist.	Instituto Tiahuanacu de Antropología, Etnografía, y Prehistoria. La Paz, Bolivia.
Int. Kongr. Arch.	Internationaler Kongress für Archäologie. Berlin, Germany.
Ipek	Ipek. Leipzig.
Journ Ethnol. Soc. London	Journal of the Ethnological Society of London. England.
Journ. Roy. Anthrop. Inst.	Journal of the Royal Anthropological Institute. London, England.
Journ. Roy. Geogr. Soc.	Journal of the Royal Geographical Society. London, England.
Journ. Soc. Amér. Paris	Journal de la Société des Américanistes de Paris. France.
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Kungl. Svenska Vet. Handl.	Kungliga Svenska Vetenskapsakademiens Handlingar. Stockholm, Sweden.
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L'Anthrop.	L'Anthropologie. Paris, France.
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Mem. Peabody Mus. Arch. Ethnol. Harvard Univ.	Memoirs of the Peabody Museum of Archaeology and Ethnology, Harvard University. Cambridge, Mass.
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Mus. Amer. Ind. Contr.	Museum of the American Indian, Heye Foundation, Contributions. New York, N. Y.
Nat. Geogr. Mag.	National Geographic Magazine, National Geographic Society, Washington, D. C.
Nat. Hist.	Natural History. The Magazine of the American Museum of Natural History. New York, N. Y.
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